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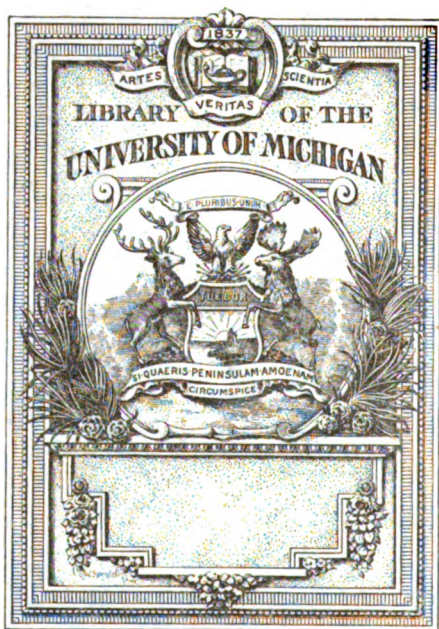
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ORIGINAL COMMUNICATIONS.

SYMPOSIUM ON RADIOTHERAPY.

THE TECHNIQUE OF ROENTGEN RAY TREATMENT.*

BY MIHRAN K. KASSABIAN M.D., OF PHILADELPHIA, PA.

The X-rays were accidentally discovered by Prof. William K. Roentgen of Würzburg, Bavaria, and first reported before the Physico-Medical Society of that place, December, 1895; this discovery resulted in a stimulation of physicists and chemists to renewed investigation of the old atomomolecular chemical theory, which later gave rise to the new theory of "ions" and "electrons" and the subsequent development of the phenomena of "radioactive substances," namely (uranium, radium and polonium). The Roentgen rays were soon found to be an invaluable adjunct in the diagnosis of disease, and in its daily application investigators observed that a dermatitis was easily produced; this suggested that the rays might be of use not only in diagnosis, but also in the treatment of pathological conditions.

As the therapeutic application of the X-rays will be discussed by the other gentlemen participating in this symposium, I will confine myself to a description of the technique, including the methods of other investigators and the results of my own experience.

The method of treatment will largely depend upon the character of the lesion, whether it is benign or malignant, super-

*Read before the Philadelphia County Medical Society, Nov. 11, 1903.

ficial or deep, and upon the susceptibility, general health and age of the patient. As regards the susceptibility of an individual to the action of the X-rays, opinion varies. Kienböck and others have denied the existence of this condition; but Schiff, Freund, myself, and many other investigators, believe in its existence. Hence, to avoid any unexpected accidents, it is well to determine the degree of the subject's susceptibility. This is accomplished by careful and short exposures.

For the sake of a comparative study of the condition, a life-sized photograph should be taken before, during and after the treatment. The photographic plate should be isochromatic, in order that the color value of the tissue may be recorded. To be accurate, these photographs should all be taken in identically the same manner. The prints should be so made as to be equal in density. If an open wound is to be treated, care must be exercised not to infect it; if it is protected with a sterile dressing, do not remove the latter unless opaque ointments are present.

APPARATUS.—The electric current used in the production of the X-rays is generated either by a static machine, an induction (Ruhmkorff) coil or a Tesla high frequency apparatus. The last two are supplied with a current either from a 110-volt direct current or a storage battery. I recommend the Ruhmkorff coil for several reasons. It is portable, compact, and the current can be gauged and regulated more accurately than that obtained by a static machine. Some operators prefer the static machine because, as is claimed, it does not produce a dermatitis. This, however, has not been proven, for dermatitis has been produced irrespective of the machine employed. As regards the size of the coil for therapeutic purposes, a seven to eight-inch spark-producing coil will suffice. One precaution is necessary in the use of a coil. The frequent application of prolonged exposures will injure the insulation of the coil; therefore it is advisable, at the end of every ten minutes exposure, during the treatment to turn off the current and allow the coil and tube to cool.

TYPES OF INTERRUPTERS.—Interrupters are divided into mechanical and liquid. The former is usually employed because of its cleanliness and easy management; it has 700 to 800 interruptions per minute. The liquid or electrolytic inter-

rupter is tedious to manipulate, requires a high voltage, and sends a heavy current through the primary coil, which injures both the coil and the tube in the prolonged exposures required for therapeutic purposes.

CHARACTERISTICS OF THE CROOKES' TUBE.—There are two kinds of Crookes' tubes: 1. Self-regulating or automatic, such as is produced by Queen & Co. of Philadelphia and Müller of Hamburg. 2. Tubes in which the vacuum is not regulated automatically. The self-regulating tube is used by most operators.

DEGREE OF VACUUM IN TUBES.—Prof. Roentgen divides the vacuum of the tube according to the degree of its exhaustion—namely, a low vacuum or soft tube and a high vacuum or hard tube. Eder, Valenta (*Grundriss der gesamten Radiotherapie*, Leop. Freund, page 167) distinguish the tubes according to the penetrability of the rays—*i. e.*, X_1 -rays, which penetrate the bones with difficulty, but the soft parts with ease; X_2 -rays, which are also absorbed by the soft tissues; and X_3 -rays, which penetrate with ease both the bones and the flesh.

Kienböck (*Klin. Wochen.*, 1900) divides the tubes into five degrees of hardness, corresponding to different degrees of exhaustion: 1. Very hard tubes, which give no Roentgen light. 2. Hard tubes, producing a bright image on the screen with but little contrast. 3. Medium hard tubes, giving a well-contrasted image on the screen. 4. Soft tubes, rich in Roentgen rays of slight penetration. 5. Very soft tubes, giving no Roentgen light.

Albers-Schönberg (*Fortschritte*, vol. iii., page 140) uses the improved Walter tube with regenerator and water cooling, designed by Müller of Hamburg. He distinguishes four degrees of Hardness: 1. Hard, giving a gray image of the bones of the hand on the screen. 2. Medium soft, giving soft, grayish-black image. 3. Soft, giving a deep-black image. 4. Very soft.

These various divisions of the vacuum of a tube are arbitrary, and do not indicate a definite degree of exhaustion. The vacuum of every tube is subject to constant changes, dependent upon length of time in use or disuse, upon changes in temperature, disintegration of the basic metals in the tube, etc. The action of the X-rays depends upon the degree of the

vacuum. It is my opinion that the rays coming from a low vacuum or *soft* tube produce a rapid tissue change and the early production of a dermatitis. The rays emanating from such a tube are less penetrating and more easily absorbed by the tissues than those produced by a high vacuum or *hard* tube. These observations have been confirmed by Kienböck (*Wien. klin. Woch.*, 1900, vol. viii., page 1153); Sharpe (*Archive of R. Rays*, 1901, vol. v., page 83); Scholchitz (*Wien. klin. Woch.*, 1900, vol. xiii., page 53); Strater (*Deutsche med. Woch.*, 1900, Ref. Hahn), and others.

Hence, when a quick reaction is desired and in the treatment of superficial conditions, a low vacuum tube should be used. A high vacuum or *hard* tube is generally employed when the diseased condition is deep, such as carcinoma of the uterus, stomach and larynx. The rays of this tube penetrate deeper than those of the low vacuum tube. It is safe to always employ the *hard* tube, whether the condition is deep or superficial, as it is less likely to produce a dermatitis.

POSITION OF THE TUBE.—The position of the tube is of very little importance. The majority of physicists believe that the rays are thrown at right angles from the anodal plate, and claim that the most active portion of the tube is the center of the phosphorescent hemisphere. I believe, however, that the rays within the tube are equal in all directions. The position of the tube in the treatment of such conditions as carcinoma of the cervix, disease of the oral cavity, larynx, stomach or rectum is a difficult matter. If the tube be placed within the cavity or in such a position as to send the rays directly to the diseased area, better results are obtained than if the rays must first penetrate the intervening tissues. For this reason special tubes have been devised by Caldwell of New York and Cossar of London for the treatment of disease of the rectum, vagina and mouth. The Caldwell tube consists of a long, cylindrical projection which fits into a metallic protector; the latter has an opening which corresponds to the area to be treated. The Cossar tube is made of lead glass, which is comparatively opaque to the X-rays, excepting at the end of the projection, which, being made from ordinary glass, allows the rays to reach only the diseased area.

THE DISTANCE OF THE TUBE.—The distance should be

measured from the target of the tube to the surface to be exposed. The distance of the tube depends upon the size of the area to be treated and whether a quick reaction is desired. The nearer the tube, the stronger the rays. Some operators prefer a short distance with short and less frequent exposures. This is a matter of personal experience, and can only be determined by a study of each case.

PROTECTION OF THE HEALTHY PARTS.—The healthy portion of the skin surrounding a diseased area should be protected by an opaque material. For this purpose sheet lead $\frac{1}{30}$ or $\frac{1}{50}$ inch thick is used; it should be covered with a non-conducting material, such as silk or adhesive plaster, and should be grounded by a wire by a water or gas pipe. The lead is perforated corresponding to the area to be treated. Some operators inclose the tube in a wooden box, painted with white lead, having an iris diaphragm. This box is clumsy, and there is also danger of puncturing the tube. I have devised a table, now in use at the Philadelphia Hospital, which can be used both for skiagraphic and therapeutic purposes. It is fitted with a diaphragm so arranged that the rays are projected only to that part of the body to be treated, and does away with the necessity of mask, protectors, etc. The table protects both the operator and the patient from the rays. The distance of the tube from the subject and its position can be adjusted with ease.

FREQUENCY OF THE EXPOSURE.—The frequency of the exposure depends upon the character of the diseased area, whether prompt action is desired, upon the duration of each exposure, and upon the distance of the tube. At the beginning of the treatment it is advisable to expose the patient from two to three times a week for the first two weeks, and then cease treatment for two or three weeks and await the development of any untoward symptoms.

DURATION OF EACH EXPOSURE.—This also depends upon the conditions which influence the frequency of the exposures. Different operators use a different length of exposure. Some resort to frequent but short exposures and with ascending doses, while others employ longer but less frequent exposures.

Albers-Schönberg never gives more than ten-minute exposures on the first and second days. If the skin remains normal,

he then lengthens the sitting, one-half hour being the maximum length allowed; longer exposures than this should not be given.

I prefer short and frequent exposures, in order to allow the system to become gradually used to the rays.

DOSAGE.—This depends upon whether the condition is superficial or deep, malignant or benign. Some authorities believe in exposing the part to the X-rays until *tanning* or *bronzing* occurs. This cannot always be depended upon, for in dark-skinned people or in negroes, and in the mucous membranes, no tanning can be noticed. I have noticed that itching often indicates the beginning of the reaction. If the treatment is continued after the development of these signs, an erythema, a vesication or a dermatitis may develop. I do not believe that a dermatitis is necessary, and if it occurs it is due to the carelessness of the operator. Such a dermatitis shows that the rays are producing destruction rather than stimulation or construction. I have patients in the Philadelphia Hospital under treatment for four months, who show considerable improvement, but no signs of dermatitis.

By "dosage" I mean the quantity and quality of the Roentgen rays employed in each exposure. Although the clinical manifestations are a guide in determining the amount of reaction obtained, yet they do not indicate the exact amount of X-rays used, I will review the possible methods of determining the "dosage."

(a) *The length of the spark gap* (Parallel) in the secondary coil was the first method of measuring the amount of resistance of a tube. The current jumps from the terminals of the secondary coil on account of the resistance offered to the current by the degree of the vacuum within the tube; therefore the higher the vacuum, the longer will be the length of the spark gaps; and the higher the vacuum, the more penetrating the rays. On this principle is based the spintometer, a French device, which is arranged parallel to the Roentgen tube and measures the length of the sparks. The length of the spark depends upon the resistance of the tube, and the latter depends upon the degree of vacuum which, influencing the quality and quantity of the rays, gives us a means of measuring the X-rays.

(b) *Skiameter*, employed first by Prof. Roentgen, consists of a different number of layers of aluminum sheets, on which the

rays are projected. The number of plates penetrated by the rays determines the penetrability of the latter.

(c) *Radiochromometer* (*Arch. d'électricité médicale*, March, 1902). This ingenious device, invented by a Frenchman, M. L. Benoist, consists of a transparent scale of layers of aluminium, increasing in thickness very much like the photometer usually employed in photography. The transparency of a single step of the scale is compared with a thin silver plate.

(d) *Chromoradiometer*.—This apparatus was invented by Dr. Guidi Holzknacht of Wien. The quantity of X-rays absorbed by a fluorescent salt which produces reflection of a certain tint is ascertained by comparison with a standard color scale.

(e) *Kiembock's* division is based upon the penetration and appearance of the shadows of the bones of the hands on the fluorescent screen at a certain distance. This is not very reliable, as the fluorescent screen (platinobarium cyanid) may vary in color and sensitiveness, and also be injurious to the hand of the operator.

(f) *Color of the Phosphorescence of the Tube*.—Some observers rely on this method, but it should be borne in mind that the color has no influence on the intensity of the rays (because the phosphorescence depends upon the composition of the glass from which tube is made). It is necessary to darken the room in order to see the color of the tube. The tube made of glass containing borax fluoresces blue color; but most tubes are constructed of Thuringen glass, and give a greenish-yellow hue. Under this division I should also like to mention the "state of hotness" of the platinum anode, which has no bearing whatever on the character of the rays, because the redness depends upon the amount of current passing and the thickness of the anode.

(g) *Voltage and Amperage* of the current going to the primary coil during exposure. The use of the voltmeter and ammeter is the most accurate method at present of determining the amount of current going to the primary coil. In its employment, however, it is necessary that the therapist should be well acquainted with his coil and interrupter, as the induced current depends largely upon the construction of the coil and interrupter. Many authorities claim that there is no need for

the standardization of X-ray technique; but that the clinical results, and not certain adopted methods, be the guide in all X-ray procedures. This may often be practical, but not scientific, and until the X-ray technique has become systematized, so long will the attainment of accuracy and perfection of this art be retarded. Hence I suggest that all operators keep and publish a complete record of their cases, to show the details of their methods and the results attained. By comparison we may soon be able to place this branch of medicine on a scientific basis.

Although still in a more or less experimental stage, yet both the theory and technique of Roentgen-ray treatment have made rapid progress during the last four years, and will undoubtedly make still greater advances as our experience in this field of work grows wider.

THE TREATMENT OF CARCINOMA AND TUBERCULOSIS BY MEANS OF THE ROENTGEN RAYS.*

BY G. E. PFAHLER, M.D., OF PHILADELPHIA, PA.

As a basis for the conclusions to be drawn in this paper, I have selected only a few cases, each of which illustrates some special point of interest. I have omitted many of the details because of the limited time, and because such details would not be of much interest to the general practitioner.

CASE 1.—Mrs. K. E., aged 84 years. Referred by Dr. Ulrich of Chester, Pa. The diagnosis was carcinoma of the right breast. Operation was contraindicated on account of the patient's age and on account of the condition of her heart. The growth was of one year's duration. There was a distinct retraction of the breast below the nipple, making a groove about $2\frac{1}{2}$ inches in length. In connection with this there was a hard mass about the size of a hen's egg. Surrounding this central mass there were other masses of lesser size and of less density. The overlying skin was healthy. There was no axillary or supraclavicular involvement. Treatment was begun April 20, 1903, and exposures were given daily for two weeks. Each exposure was of ten minutes duration, at a distance of 15 inches, with a high vacuum tube and 3 to 4 ampères current.

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The treatments were then given three times a week for a period of six weeks, then twice a week for ten weeks, and once a week for two weeks. She had fifty-seven treatments in all, the length of each exposure was gradually increased from ten minutes to twenty-five minutes. After the first week there was improvement in that the semisolid masses disappeared. At the end of two weeks the central mass seemed to be a little softer. From this time there was constant improvement. The mass gradually became softer and smaller until it disappeared. The points of special interest in this case are the early and constant improvement, and the absence of any dermatitis, in spite of the unusually long exposures. In no other case have I been able to give nearly so long an exposure without producing a marked dermatitis. As a whole, it is one of the most remarkable cases that I have seen.

CASE 2.—Mrs. K. J., aged 40 years. Diagnosis, recurrent carcinoma of the left breast. She had been operated upon twice by Dr. Sanford of Memphis, Tenn. The first operation was performed one month after the growth was first noticed, May 7, 1900. A growth reappeared one year later, and was removed December, 1901. A recurrence developed in July, 1902. X-ray treatment was begun in October, 1902, at which time there was an induration involving the entire scar and about once inch on either side, with nodules in the axilla and the left supraclavicular region. There was also an induration in the right breast. Both mammary, axillary and supraclavicular regions were treated. Seventy-five treatments in all were given, between October 11 and May 31, when the carcinomatous tissue seemed to have disappeared. Treatments have been given since that time at intervals of two to four weeks for the purpose of preventing any recurrence or any involvement of the mediastinal glands. The patient's general health before treatment was failing, and she was not expected to live six months. Her general health improved while under treatment. A dermatitis was produced on two occasions, each of which seemed to be followed by distinct improvement.

CASE 3.—Mrs. J. W., aged 48 years. Recurrent carcinoma of the left breast. She was operated upon by Dr. Wharton in June, 1902, one month after the growth was first noticed. The whole breast and the axillary glands were removed. A recur-

rence was first noticed in November, 1902. X-ray treatment was begun January 22, 1903. At this time nodules from the size of a pea to that of half a walnut were found scattered through the field of operation. A small indurated gland could be felt in the left supraclavicular region. Twenty-six treatments were given between January 22 and April 7, 1903, when a burn of the second degree had been produced. The growth had lessened very much, both in size and induration. Treatment was discontinued. The thyroid gland, which was large at the beginning, now grew rapidly, and the patient developed the symptoms of exophthalmic goiter. She was taken to the Presbyterian Hospital, where the burn healed, the thyroid gland decreased rapidly in size, and the general health of the patient improved. The patient then developed pain in the axilla, and Dr. Newcomet reapplied the rays, which produced another burn, which developed after leaving the hospital. I advised her to go to the seashore and allow the burn to heal. While there a recurrence developed upon the site of the burn without the burn healing.

The third case to all appearances was similar to Case 2. The results have been very different. The case is instructive, because of the idiosyncrasy against the rays, since less rays were used than in either of the two previous cases. It also shows that a severe burn is no proof against carcinoma; also that it is wrong not to keep a case under observation while a burn is healing, or even when a good result is obtained the case should be watched.

CASE 4.—Miss D. B., aged 16 years. Referred by Dr. L. Webster Fox. A case of retrobulbar sarcoma, the diagnosis being confirmed by microscopical examination. The antrum of Highmore had been previously curetted by Dr. E. B. Gleason. The growth again rapidly infiltrated the sinuses. The patient had been examined by Dr. Walter Freeman. She had also been examined by Dr. W. L. Rodman, who refused to operate and advised X-ray treatment. No one expected the patient to live. At the time of beginning treatment the patient was too weak to stand, complained of severe headache and pain in the eye. There was a marked bulging of the eye from the orbit, and a protusion of the conjunctiva. The case was treated daily with 5-minute exposures, with a high vacu-

um tube, and 3 to 4 ampères of current, at a distance of 12 inches. At the end of a month the swelling had almost disappeared, the pain was less, and the patient was well able to walk around and left the hospital. There had been an erythema present for two weeks. She was then treated twice a week for a month, at the end of which time she could open her eye slightly, and felt fairly well. She was then treated once a week for two months, when she was apparently well, except for occasional pain in the region of the inner canthus. She is still being kept under observation and occasional treatment. There was no loss of sight.

This case is important: (1) because it was a sarcoma; (2) because of its extensive infiltration; (3) because of its prompt and constant improvement; (4) because there was no injury to the organ of sight as a result of the treatment.

CASE 5.—Mrs. A. S., aged 69 years. Epithelioma of the face. Referred by Dr. J. M. Anders, July 3, 1903. During the previous two months an epithelioma had been developing upon the right side of the nose, and extended upon the bridge of the nose. It was completely removed by twenty exposures, covering a period of two months. The cosmetic result is perfect. There is no scar, and the skin is smooth and of a pink color.

CASE 6.—Mr. S. G., aged 60 years. Epithelioma of the mucous membrane. Referred for X-ray treatment by Dr. Hollopeter. Ten years ago a warty growth developed upon the lower lip. He began treatment at a sanatorium near Boston, July, 1900, where caustics were used. He remained there eighteen months, at the end of which time he came to Dr. Hollopeter, and was referred to me. His mouth could then not be opened except to admit the little finger, and this gave him severe pain. The growth involved the right angle of the mouth and the greater part of the cheek. There was an enlarged gland in the right submaxillary region. The gland disappeared in about a month under treatment, but the growth itself, being mostly in the mouth, slowly but gradually increased in size and the amount of pain increased. The case was inoperable from the first, but the rays had little influence except perhaps to slightly retard the growth. Ninety treatments were given.

Cases 5 and 6 are important because of their differences. In the first the epithelioma was entirely superficial, involved

the skin, had never been tampered with by caustics, was treated early with the X-rays; and yielded promptly with perfect results. In the second the epithelioma was not entirely superficial, involved the mucous membrane, had been tampered with by caustics for eighteen months, X-ray treatment was begun late, after the growth had started to spread, and a long course of treatment was given with practically no results.

CASE 7.—Miss A. N., aged 20 years. Tuberculous adenitis. Referred by Dr. Ernest La Place. She had had tuberculous adenitis for nine years, and had been operated upon by Dr. La Place three years ago, and again one year ago. She was referred for X-ray treatment February 9, 1903, on account of swelling of the glands upon both sides of the neck, and because of an indurated scar upon the right side of the neck. After ten treatments the scar and the glands were softer. After six weeks and fifteen treatments the scar had almost faded and the glands were almost imperceptible. After five months and thirty-four treatments the glands were imperceptible, and the scar was soft, pink, and barely noticeable.

CASE 8.—Miss J. F. aged 16 years. Referred by Dr. W. L. Rodman, March 3, 1903. Diagnosis, tuberculous adenitis and tuberculous ulcers of the legs. She was operated upon one year ago, when the glands were completely removed from the left side of the neck, from the lower portion of the right side of the neck and from the right axilla by Dr. Rodman. At time of beginning treatment there was enlargement of the post-cervical glands and a distinct enlargement just below the right ear. There were also three ulcers upon the right leg, varying in size from $\frac{1}{2}$ inch to 2 inches in diameter. She has been given forty treatments, covering a period of eighteen weeks. The two smaller ulcers upon the leg healed within a month. In six weeks the largest gland had ruptured and healed. At the end of four months the enlargement of the gland had disappeared. The largest ulcer upon the leg had been reduced to one-third its original size, and had a healthy appearance, but needed support of its circulation. Dr. Burns then applied an elastic cast and the ulcer healed in three weeks.

The above two cases are important because they show undoubtedly a good influence of the rays upon the tuberculous glands and ulcers.

CASE 9.—Miss K. B., aged 30 years. Referred by Dr. La Place, under whose care she had been for fifteen years. Diagnosis, lupus vulgaris. At the time of beginning treatment the diseased area covered the greater part of the anterior portion of the face and the entire nose. A distinct reaction was produced in two weeks by seven exposures. Following this reaction the tubercles were leveled to the skin and desquamation took place. She has been given eighteen treatments in four months, and is practically well.

I do not report this case on account of the lupus, since that phase of the subject will be fully dealt with by Dr. Schamberg, but because of another very interesting and remarkable coincidence. When she began treatment, and for eight years previously, she had been quite deaf, so that it was difficult to make her hear. At the end of the course of treatment she could hear ordinary conversation. This remarkable result was unthought of, and therefore no accurate observation had been made before treatment; but eight years ago a specialist in New York had examined her and pronounced her deafness incurable. The result suggests that the rays may be of value in some forms of deafness.

In conclusion, I am convinced :

- (1) That the X-rays are of undoubted value in the treatment of certain cases of both superficial and deep-seated carcinoma and tuberculosis.
- (2) That the more a case has been tampered with, the less likely it is to yield to the influence of the X-rays, *e. g.*, Case 6.
- (3) That daily treatments, carefully and properly given, will produce the best results, *e. g.*, Cases 1 and 4.
- (4) That we should try never to produce a dermatitis beyond a simple erythema.
- (5) That there are idiosyncrasies in certain people which render them most susceptible to the X-rays, and in these people deeper burns may occur in spite of the most careful treatment. Case 3.
- (6) That epithelioma involving the mucous membrane is much less likely to yield to the effect of the X-rays than when it simply involves the skin, *e. g.*, Case 6.
- (7) That there is not likely to be any interference with the sense of sight, even though the X-rays are used directly over the eye. Case 4.

(8) That tuberculosis, whether of the skin or of the glands, will yield, at least in certain cases, to the effects of the X-rays. Cases 7, 8 and 9.

(9) That the X-rays may be of value in certain cases of deafness.

(10) That the X-rays will give better cosmetic results than any other form of treatment in simple epithelioma of the face. Case 5.

(11) That epithelioma of the mucous membrane should be removed as early as possible by the knife, and this followed by X-ray treatment.

(12) Operable cases should be operated upon, and in each instance followed by a course of X-ray treatment, and X-ray treatment should be given at the first sign of a recurrence.

(13) Inoperable cases should be given a trial with the X-rays, since even hopeless cases sometimes yield to this form of treatment. Case 4.

(14) It is desirable to produce a distinct reaction in the treatment of lupus. Case 9.

ROENTGEN-RAY TREATMENT OF THE EYE AND ITS APPENDAGES.*

BY WILLIAM M. SWEET, M.D., OF PHILADELPHIA, PA.

No remedial agent introduced to the attention of the profession in recent years has proved of so much value in the diagnosis and treatment of certain ocular affections as has the Roentgen rays. Over six years have passed since the rays were first employed in the diagnosis of foreign bodies in the eyeball, and since that time many eyes have been saved by their aid that otherwise would have been lost. Of the several methods of diagnosis available, the X-rays is the only possible method of determining in ocular injuries from iron or steel, brass, shot, glass, or similar substances, whether the material causing the injury has simply wounded the globe, or has penetrated and lodged within its coats or in the orbit. Most of the injuries are due to the entrance of particles of iron or steel; and the entrance of the chip of metal, often covered with grease and dirt, into the interior of the eye is a serious form of injury. Even with prompt removal of the material the eye may be lost by

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infection or severe iridocyclitis. By the employment of accurate methods of localization, which indicate the situation of the metal and its approximate size, and the use of powerful magnets, the percentage of successful extractions of foreign bodies from the eye is greater than it was a few years ago, and even better results may be expected in the future with the more general recognition on the part of the profession of the importance of early diagnosis in these ocular injuries, and the prompt removal of the metal, if shown by the X-rays to be situated in the eye-ball.

It is generally impossible in injuries from small particles of metal to determine without the aid of the X-rays whether the metal has penetrated into the interior of the eye. Small entrance wounds in the sclera are difficult of recognition, while opacity of the lens prevents a view of the vitreous chamber. In all cases, therefore, of injury to the eyes of workmen engaged in occupations in which particles of metal are liable to break from the tools or metals they are working, and in which there is a decrease in the vision following the accident, a radiograph should be made at once. Nothing is to be gained by waiting until the local signs of inflammation have subsided, since valuable time is thereby lost in removing an injurious substance from the eyeball, and the delay of several weeks may result in the formation around the body of a fibrocellular exudate that will resist all attempts at extraction. Negative findings by the X-rays are equally valuable, ensuring that a foreign body is not retained in the eye to cause future trouble.

In a series of 102 cases reported by the author two years ago, the rays showed a foreign body in the eye in sixty-one. In forty-five cases an attempt was made to extract the body, and was successful in thirty-two; but in six cases subsequent enucleation was required. When it is considered that with the exception of ten cases all these patients were treated by the attending physician on the expectant plan, and weeks and months elapsed before an attempt was made to locate and remove the foreign body from the eye, it is surprising that the percentage of lost eyeballs was not greater. During the past two years the value of the X-rays as a means of diagnosis in ocular injury has become more generally recognized, and the prompt removal of the body has resulted

in the preservation of a larger proportion of eyeballs with useful vision.

The value of the X-rays in the treatment of certain forms of superficial growths in the region of the eyelids, such as epithelioma and rodent ulcer, has been fully demonstrated, and I believe we are no longer justified in resorting to the extensive plastic operations formerly required for growths of this character, with the subsequent scarring of the face. I have treated over twenty cases of epithelioma of the eyelids and structures adjacent, and in every instance except two have succeeded in healing the ulcerated area, the new tissue replacing the disease presenting to all appearances the characteristics of a healthy skin. In one case the area has remained healed for over one year. In one case of failure to relieve the disease entirely the orbit was implicated, and the only hope of cure depended upon removal of the shrunken eyeball, which was refused by the patient. In the other case, a large rodent ulcer of the side of the head, the rays acted satisfactorily for several months, but recently the disease has spread and affected the external canthus. This man shows to a marked degree the effect of the rays upon the central nervous system, to which attention has been previously called by other operators. Exposure with a tube of even moderately high vacuum causes a dulling of his faculties the next day and interferes with his work as a salesman.

The latest application of the rays in the treatment of chronic affections of the eyelids, such as trachoma and vernal conjunctivitis opens up a new field which gives promise of successful results. In the few cases of these diseases in which I have employed the rays there was shown a decrease in the infiltration of the conjunctiva and a lessening in the number and size of the granulations, but in none has there been a cure. Few of the cases have been under observation sufficiently long to indicate the probable effects of treatment. So far as the published reports of cases may be judged, the results in trachoma offer promise of some success, while in several instances of vernal conjunctivitis there has been an entire disappearance of the granulations, both from the eyelids and at the corneal junction. In these later cases the apparent cures have been secured during the warm weather, a period in which the usual remedies fail to make any impression upon the infiltrated structures.

ROENTGEN-RAY TREATMENT OF KELOID.*

BY HENRY K. PANCOAST, M.D., OF PHILADELPHIA, PA.

In dealing with keloid, the X-ray worker has a different problem at hand than that in the treatment of malignant growths. Instead of directing our attention to a tumor that sooner or later must kill the patient if the X-rays, or perhaps radium, do not succeed, we have a growth that causes only disfigurement, and sometimes pain, and these are the chief reasons for surgically ridding the patient of such neoplasms. The almost certain recurrence following removal by the knife or caustics, etc., has led to recourse to the X-rays in an attempt at permanent cure. From my own experience, it seems possible to remove keloids, in a measure, by the X-rays, but the possibility of recurrence after such treatment cannot yet be given. Experience also shows that the scar resulting after apparent cure will still be somewhat disfiguring, though to a much less extent than before the X-ray applications. The treatment is certainly a very long one, and requires great patience on the part both of patient and operator in continuing to the end a possibly successful method of treatment. In patients of the colored race there is an almost certain chance of partially destroying the pigment layer of the skin, and this seems to be more marked in the darker-skinned or more pure-blooded negroes, but is just as noticeable in the X-ray treatment of any tumor. Therefore the restoration of the tissues to the normal appearance of the part cannot be promised. I have noticed this particularly when the growth has involved the helix and the lobule of the external ear.

In the following cases reported particular points will be brought out, though some of them will be of no special interest:

CASE 1.—B. F., female, colored, aged about 21 years, referred by University Hospital Ear Dispensary, was presented for treatment of a keloidal growth of the lobule and helix of the left ear, following piercing of the ears some years before. Treatment was begun November 3, 1902, and continued until January 21, 1903, thirty-four treatments, or an average of three per week, being given. Each application was from ten to

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fifteen minutes, and with a moderate vacuum tube eight to twelve inches from the skin. Burning of the skin over the growth was present a great part of the time, but was controlled by applications of zinc oxide ointment and gave no trouble. Thiosinamine was tried early (November 15, 1902) in 3-grain doses, given at bedtime, as this was found to be the best time for administration of this drug. The patient stood the drug remarkably well, and the quantity was increased to an additional morning dose January 8. An assistant took charge of the case from January 21 to April 4, and unfortunately the records were lost, but we can safely say that the number of applications during that time was at least fifteen. From April 4 to June 8 the patient was nearing a cure, and came once a week only for a 5 or 6-minute treatment. She was not a darkly pigmented woman, and the loss of pigment was not marked. The ear had not returned to its apparently normal appearance when we told the patient she was "cured." We consider her sixty or more treatments a quick cure. The woman was told to return at intervals, but she has not done so, and whether or not there is a recurrence cannot be truthfully stated.

CASE 2.—L. W., male, colored, aged about 55 years, with multiple keloidal growths of the dorsum of each hand and wrist, and each side of the neck and cheek, following a burn from a powder explosion. Treatment was started July 26, 1902, and continued until August 11, when the patient stopped coming, after having had six 10-minute treatments to the right side of the neck, three to the left side and right hand, and one to the left hand. The only fact to be reported is the patient's enthusiasm in believing that the stiffness of the neck and wrists was benefited. The difference between hypertrophied scar and keloid is of no importance.

CASE 3.—A. C., mulatto, female, single, aged 27 years, cousin of Case 4. Personal and family history negative. Both ears were "pierced" at the age of 16 years, and the growth in each ear was noted three years later, involving the lobule. It increased steadily, and four years ago began to spread to the helix of each ear, the neck below the ears and the angles of the jaw. There has been no pain. A scar on the left hand since childhood has shown no keloidal or hypertrophic tendency. On the diagnosis of keloid, treatment was begun Feb-

ruary 14, 1903, and until May 10 thirty-one treatments were given (record missing), averaging three applications a week to each side. There was no great improvement, as treatments have not been pushed.

CASE 4.—Mrs. K. B., colored, female, aged 39 years, referred by Dr. M. H. Biggs. History negative, except typhoid fever at age of 26. This was followed by an abscess on the right side of the neck. The abscess was opened and treated. After marriage she noticed that the scar of this operation began to grow steadily and increased in size as she bore children. The growth was removed eleven years ago, but recurred. A separate tumor made its appearance back of the ear at about the same time. When examined on admission, a keloid growth was found on the right side of the neck below the ear and extending over the angle of jaw. Back of the auricle there was a separate growth with no resemblance to the keloid. She complained of insomnia and severe pain in the face, neck and right arm, which was thought to be due to the growth, but subsequently found to be accounted for largely by another cause. These symptoms were for a time controlled by coal-tar products. From August 31 to December 31, 1902, thirty-eight treatments were given, averaging about three per week, with intervals of from one to three weeks at times. Thiosinamine was used, but was not borne well by the stomach. The applications started with 10-minute exposures, increased to 20 minutes, and the tube was moved from 12 inches to as close as it could be stood. After sixteen such treatments there was intense pain in the face, and soon an abscess formed under a large part of the growth. This was opened October 10, and a large quantity of thick, greenish, foul-smelling pus was evacuated. The inflammatory process had entirely disappeared in three weeks, and treatment was again started. It was evident that in this interval there had been a marked subsidence of the keloid growth. Until November 23 the applications were less severe, but from then until December 10 the treatment was stopped because of pain in the diseased region and a burn of the skin, and it was thought another abscess was forming. From December 10 to 31 the sittings were regular, but during this time numerous pits filled with a soft caseous material were found scattered over the growth and penetrating deeply.

They have not been noted of late. During December the patient suffered intense pain in the neck and arm of the affected side, and the question of a cervical rib arose. Examination and the skiagraph gave a positive proof of this condition—a double cervical rib. On January 4, 1903, the patient had to be admitted to the University Hospital because of pain and swelling in the right arm, due to the cervical rib, but she was discharged in a few days. Since January 4 treatments have been pretty regular, with intervals of rest. Sloughing of the skin over the growth required a cessation for ten days in the latter part of January, and later another abscess formed, and was opened February 11 and the same kind of pus evacuated as before. Healing was rapid, and treatment was started again February 25. It was again noted that there had been a decided decrease in the size of the keloid growth, following the suppurative process. From February 25 to August 4 there were forty-eight applications of from ten to fifteen minutes duration, with the tube 10 or 12 inches away. A month of vacation followed, and on Sept. 7 the tumor behind the ear was removed. After healing of the wound twenty treatments were given until October 31, when again there were signs of an abscess under the growth. It seems that treatment was stopped just in time, for we were able to avoid opening the abscess, and now only a slight dermatitis is present, and we expect a further subsidence of the growth. All of these periods of suppuration have been attended with marked constitutional symptoms. Prompt healing and resolution seem to favor a *mild* infection if any is present: but no cultures were taken. Now all signs of suppuration have disappeared.

In this case there are several questions to consider. When shall treatment be stopped? This is a difficult matter to decide, in view of the fact that a return to the normal appearance cannot be expected. I am inclined to continue with long, frequent exposures, with the tube close to the patient, and to expect repeated recurrences of the suppurative process, but stopping short of pointing and of burning the skin. Milder treatment seems to have little effect. Having already treated the case over a year, another year will likely be required to effect a cure, and I do not expect a complete disappearance. Recurrence is an uncertain factor. It is not likely that the

pigment will return, as many negroes are known to "turn white" in spots. The lighter in color the skin, the less important is the loss of pigment.

No satisfactory explanation can be given for the suppuration, but it was the result of necrosis under the growth, and probably dependent on blood-vessel changes. As there was a marked subsidence and flattening of the tumor after each period of suppuration, the necrotic changes were probably in the keloid tissue itself, and not to any extent in normal underlying structures.

We are in doubt as to the nature of the tumor back of the ear. It has been diagnosed a fibrolipoma, but sections have not yet been made. There was a very slight reduction in size and some softening, but it did not react like the other growth. Treatment of the area it occupied will be carried out to prevent keloid formation, as the wound did not heal by first intention.

CONCLUSIONS: (1) Keloids are amenable to X-ray treatment, but it is long and tedious, and does not completely restore the normal appearance. (2) Future cases will be operated upon first, and the rays subsequently applied in an effort to prevent recurrence.

THE FINSSEN LIGHT AND THE ROENTGEN RAYS IN THE TREATMENT OF DISEASES OF THE SKIN.*

BY JAY F. SCHAMBERG M.D., OF PHILADELPHIA, PA.

It is a remarkable fact that within less than a decade three forms of radiant energy have been brought into use in the treatment of disease. The employment of radium is still in an experimental stage, but concentrated actinic rays of light, as employed by Finsen, and the Roentgen rays have been accorded an established position as therapeutic agents.

The purport of this paper is to record the results of treatment of a considerable number of skin diseases with the actinic rays of light and with the X-rays. One hundred and eleven patients were treated in all, of whom fifty-eight received treatment in the Phototherapeutic Laboratory of the Philadelphia Polyclinnic,

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The light apparatus in use at the Polyclinic is the so-called London Hospital Lamp, which was brought from London about eight months ago by Miss Kirkbride, under whose personal supervision the treatments have been given. The lamp is a modification of the Lortet and Genoud apparatus, which is much used in France.

This lamp differs in many respects from the original large lamp used by Finsen. Finsen's lamp consisted of two cylinders fitting telescopically into each other, thus permitting approximation or separation of the lenses. Each cylinder was provided with two piano-convex lenses. Between the two sets of lenses was a layer of ten liters of distilled water. At the end of the apparatus were two flat glasses, between which was a solution of the ammoniosulphate of copper. The intensity of the arc light varied from thirty-five to fifty ampères. I understand that the copper solution has been replaced by running cold water, and that a current of eighty ampères is now used. The exposure was at first two hours, but has been since, owing to improvements, reduced to one hour.

The simplified lamp in use at the Philadelphia Polyclinic consists of an arc light with adjustable carbons, in front of which is a hollow metal shield or jacket. Set in the center of the jacket and attached to the inner and outer surfaces are two quartz lenses. When the lamp is in use cold water is kept circulating between the lenses and in the metal shield surrounding the lenses.

The lamp may be operated with an alternating or a direct current. At the Polyclinic a 110-volt alternating current was used, with a strength of fifteen to sixteen ampères.

The area of the skin to be treated is pressed firmly against the outer lens, which may be changed according to the contour of the part to be treated. It is essential to press out the blood and render the skin anemic, otherwise the blood acts as a red screen and filters out the actinic rays. In the original Finsen light the rays of light are focused upon the skin, local exsanguination being effected by a separate compressing lens. In the lamp just described the light is not brought to a focus, but the contact of the patient with the lens enables the rays to reach the skin before they diverge. The running water and the passage of the light through the rock-crystal lenses filter out the heat rays, so that the light is perfectly cold.

RESULTS OF TREATMENT AT THE PHILADELPHIA POLYCLINIC WITH THE LONDON HOSPITAL LAMP.—The lamp has been in use since March 12, 1903, during which time 897 treatments have been given to fifteen patients. Three of these patients had but few treatments, and will be referred to later. The remaining twelve patients came regularly, and received in all 880 treatments. The sittings varied in duration from thirty minutes to one hour and three-quarters, most of them lasting one hour; in the beginning the treatments lasted thirty minutes; but it later became necessary to extend the period in order to secure the proper degree of reaction. The average duration of the sitting was perhaps three-quarters of an hour. An effort was made to secure as deep penetration as possible, and with this end in view long treatments were given. Of the twelve patients, seven had lupus vulgaris and five had lupus erythematosus.

The results have not been such as to make us very enthusiastic. Of the cases referred to none have been cured by the "light" treatment, although improvement has occurred in some. It should be stated that none of the cases were of recent development, save possibly one; the majority were of long standing and inveterate. The treatment was carried out with great care by Miss Kirkbride, who had an opportunity while in London of observing the treatment in the London Hospital. The patients came regularly for many months, and gave themselves up fully to the treatment. The use of a lens the size of a silver dollar enabled the operator to cover comparatively large areas in a short time.

The disappointing results which we have obtained should not be interpreted as indicating the failure of concentrated light in the treatment of lupus, but should rather be regarded as evidence of the insufficiency of the simplified lamps which are being put upon the market. Wherever the big lamp employed by Finsen is used the results are said to be highly gratifying. It was thought that the modified lamp would suffice and have certain advantages over the original one. It is much less expensive, less cumbrous, costs less to operate, and permits of the treatment of a larger area of skin at one time. With the big lamp only an area the size of a cubic centimeter is treated; whereas with the small lamp an area the size of a silver

dollar can be covered. In the former, however, the light is concentrated to a focus on the skin, and the effect is more intense.

It was also thought that the use of the Lortet-Genoud type of lamp would lessen the time of exposure, but we have found it necessary in long-treated cases to increase the exposure to one hour or more to secure the desired reaction. And this increased exposure has not been necessitated by the occurrence of pigmentation. Our experience has been the same as that of Hyde and Montgomery, namely, that little or no pigmentation occurs as the result of treatment in a diseased skin. The healthy skin, however, is rapidly pigmented. The exposure of my arm to the light for ten minutes was followed by an erythema, which gave way to a *café au lait* pigmentation lasting five months.

Our experience would lead us to believe that the small lamps do not give sufficient penetration to destroy deep-seated lupus nodules. We have been able in most instances to secure a pronounced surface reaction, but it is evident that it is not sufficient. While Paris physicians claim to have had a considerable measure of success with the small lamp, the limitations of this apparatus are recognized at the London Hospital, where it is used only on superficial lesions, a large Finsen lamp being employed for the more deeply-seated nodules. Finsen himself insists upon the superiority of the big lamp. The current strength used in the Finsen lamp is very much greater than that utilized in the lamps of the Lortet-Genoud pattern.

THE USES OF THE FINSEN LIGHT.—Actinotherapy has been employed chiefly in the treatment of lupus vulgaris and lupus erythematosus, and it is in these affections that it finds its principal field of usefulness. Varicose tuberculides, rodent ulcer and acne vulgaris have been cured by the Finsen light, but more uniformly successful results are obtained with the X-rays. Finsen has subjected forty-nine cases of alopecia areata to the light treatment, with thirty cures. In eighteen cases treated by Hyde and Montgomery no result was noted in thirteen. They conclude that the treatment offers no marked advantage over other methods.

Finsen reports nineteen cases of nevus vascularis planus treated with "light." In a few instances the disfigurement entirely disappeared; in others the color diminished in intensity.

While none of our cases of lupus erythematosus were cured, the greatest improvement was noted in the case in which the vascular element was pronounced.

THE ACTION OF THE FINSSEN LIGHT AND X-RAYS COMPARED.—Roentgen rays and Finsen light differ very markedly in their action upon tissues. Concentrated actinic rays produce in the course of a number of hours a distinct reaction, usually characterized by erythema and vesiculation. The blistered areas heal up in about a week. Areas of skin that have been repeatedly treated gradually become less sensitive to the influence of the light and require a longer exposure to produce blistering.

There is but superficial penetration of this light, and consequently subcutaneous tissues are not affected by it. A distinct bactericidal influence is exerted. Signs of improvement may be observed at an early date—usually upon the subsidence of the reactive inflammation.

With the X-rays, on the other hand, no immediate reaction is observed in the treated area; the effect of the rays is, however, cumulative, the parts treated becoming progressively more susceptible to their influence. The rays penetrate deeply, acting not only on the skin, but also upon subcutaneous and visceral structures.

Improvement is comparatively slow in making its appearance; it may continue for a long time after the cessation of the treatment. Curative changes may take place without an inflammatory reaction being produced. No direct bactericidal influence is exerted, but tissues are fortified against the invasion of bacteria,

THE COMPARATIVE VALUE OF THE FINSSEN LIGHT AND THE X-RAYS IN LUPUS.—The majority of writers are of the opinion that the Finsen procedure is the best method of treating lupus. With the Finsen lamp the results, according to report, have certainly excelled, both as regards percentage of cures and cosmetic effect, any method of treatment previously in vogue.

The X-rays have also been found to accomplish wonderful results in lupus vulgaris. The observers who have reported cures are too numerous to mention. The cosmetic result is but little, if at all, inferior to that obtained with the Finsen light. Each method has certain advantages over the other.

Moreover, certain forms of lupus will do better under one treatment, and certain others under the other.

The Finsen light can never do any harm to the tissues; the inflammatory phenomena subside at the end of a week or ten days, and the improvement resulting may be accurately estimated. The effect of the X-rays, on the other hand, cannot be known for some time, and consequently the action cannot be so well controlled. This advantage is not as important now as formerly, as the danger of a serious X-ray burn now-a-days is not great.

The Finsen light has the disadvantage that every treatment produces a dermatitis; this is a considerable inconvenience to the ambulant patient, who is obliged to wear some dressing on the face. The Finsen light can only be applied to a very small area, whereas the X-rays may be applied at each treatment to large surfaces. In extensive cases the light treatment requires sittings for many months, and involves a considerable expenditure of money.

The application of both treatments is painless, although a considerable degree of soreness follows each "light" treatment. In the event of an X-ray burn the soreness would be doubtless greater than that caused by actinotherapy.

Lupus of the mucous membranes, particularly of the nose and mouth, cannot be satisfactorily treated with the Finsen light, but responds usually in a gratifying manner to the application of the X-rays. Ulcerative lupus also precludes treatment with the Finsen light, but reacts well to the Roentgen treatment,

Hypertrophic lupus, I think, does better with radiotherapy than with phototherapy, whereas cases with small nodules imbedded in scar tissue will do better with the Finsen light.

Time will determine the special indications of the two methods of treatment and the comparative results obtained. Both therapeutic agencies are of great value, and should be used to supplement each other.

In lupus erythematosus the Finsen light seems to have given better results than the X-rays, although both treatments leave much to be desired. Doubtless many reports of cures will require later revision.

ROENTGEN-RAY TREATMENTS.—The present report includes the records of over 100 X-ray patients, of whom about one-half were treated at the Polyclinic Hospital. They were as follows:

Epithelioma, 27 cases ; acne, 14 cases ; eczema, 16 cases ; psoriasis, 4 cases ; sarcoma, 3 cases ; lupus vulgaris, 4 cases ; acne rosacea, 2 cases ; lupus erythematosus, 2 cases ; leukokeratosis lingualis, 1 case ; rosacea, 1 case ; keloid, 2 cases ; sycosis, 3 cases ; tinea sycosis, 1 case ; ichthyosis, 1 case ; vitiligo, 1 case ; folliculitis, 2 cases ; seborrhea oleosa, 1 case ; seborrhea sicca, 1 case ; mycosis fungoides, 1 case ; ulcus cruris, 1 case ; eczema seborrhoicum, 1 case ; verruca, 1 case ; carcinoma of larynx, 1 case ; carcinoma of esophagus, 1 case ; carcinoma of mouth, 3 cases ; dermatitis herpetiformis, 1 case.

Space will not permit of a detailed description of all of these cases. It will doubtless suffice to refer to the results obtained in the various diseases, with brief mention of the more interesting an instructive cases.

Epithelioma.—Other writers are presenting this evening their views of the value of the X-rays in deep-seated carcinoma. I shall confine my remarks to the effect of the rays in cutaneous carcinoma. We have treated twenty-seven cases of cancer of the skin and mucous membranes. It would be misleading to give statistical results, for so much depends upon the character, extent and situation of the growth. Moreover, a number of the patients did not remain under treatment sufficiently long to warrant a proper estimate of the treatment. It may be of interest to state that thirteen of the above cases were cured. Most of the patients cured were cases of superficial epithelioma about the face, A very satisfactory result was obtained in a moderately deep epithelioma of the neck that recurred after excision. Two cases of superficial epithelioma of the lip appear to be well, although sufficient time has not elapsed to warrant a definite statement. A nodular epithelioma of the lip after eight treatments was rather larger than before the rays were used, and the patient gave up the treatment.

With deep-seated skin cancers our results have not been encouraging. Cancer of the buccal mucous membrane is always a dangerous growth and particularly liable to recurrence.

A large proportion of the cases of epithelioma which, in our hands, were cured by the X-rays could doubtless have been successfully treated by other means. Small superficial epitheliomata may be cured by excision, curetting, electrolysis and various caustics. In order that the X-rays shall remain the

method of choice, it must be shown that the rays are superior in effect to the other methods, for the latter accomplish the result in a much shorter time and with less expense to the patient. The liability to the production of a burn is, moreover, to be considered. A distinct advantage of the X-ray treatment is the beautiful cosmetic result attained. Where the avoidance of scarring is an important consideration the X-rays had better be employed, for the resulting cicatrix is smooth and excellent in appearance.

The rays have a special field of usefulness in small epitheliomata situated upon the borders of the eyelids, the alæ of the nose, and in other similar regions. It is desirable for manifest reasons to avoid any unnecessary destruction of tissue in these cases, and no other method of treatment is equal to the rays, which will effect a disappearance of the growth with the least possible deformity.

The X-rays are also of great value in rodent ulcers about the orbit, in those cases in which instead of a tumor above there is destruction of tissue. These cancers are often completely inaccessible to the knife, for there is nothing to remove; the thin border and base are often in apposition with bony structures. Some otherwise fatal rodent ulcers of the orbit have been cured with the X-rays.

There is a third class of skin cancers—the deep-seated cutaneous and subcutaneous carcinomata—which, as a rule, do not do well under X-ray treatment. Where these growths are surgically accessible I believe the best results are obtained by excision followed by X-ray treatment.

Many of the deep skin and mucous membrane carcinomata appear to improve in a striking manner for a time; but not infrequently the disease subsequently relapses and spreads. I believe that in several cases under my observation the carcinoma has spread more rapidly by reason of the inflammatory reaction induced by the X-rays. A similar observation has been made by Hyde and Montgomery. It is, therefore, seen that in inappropriate cases the X-rays may do harm.

In summing up, it may be stated that the X-rays have certain limitations in cancer of the skin. They will cure almost all cases of superficial epithelioma; they will cure many epitheliomatas about the facial cavities, and accomplish the result

with less loss of tissue than by surgical methods. They will cure a small percentage of deep cutaneous and subcutaneous carcinomata, but where they do not do good in these cases they may work harm by stimulating extension of the growth.

Acne.—We have treated fourteen cases of acne with X-rays. I am in full accord with the opinion expressed by other dermatologists, that no remedy can approach in efficacy the X-rays in the treatment of this dermatosis. In most cases a distinct improvement is noted after a few treatments; old acne lesions disappear and new ones develop in smaller number. The ultimate result is often brilliant, rebellious and long standing cases yielding to treatment in a short time. What is most gratifying of all is that the cures are as a rule permanent. There may be an outbreak of a few pimples after the treatment has been suspended for a while, but these disappear rapidly under further treatment.

Eczema.—The X-rays have proven themselves to be a valuable remedy in the treatment of some forms of eczema. We have used this agent in sixteen cases of eczema, most of which were of the vesicular variety, occurring about the hands. Inasmuch as other treatment was employed at the same time, it is not possible to definitely estimate how much curative influence was exerted by the rays. From a comparison, however, with other cases of a similar character not receiving X-ray treatment, the conclusion has strongly impressed itself upon us that the X-rays have been an important factor in the cures effected.

The X-rays in proper dosage seem to stimulate the normal structures of the skin to healthier activity. When used in excessive strength they are, of course, capable of doing harm. We have invariably used a weak current and brief exposures, not exceeding five minutes, in the treatment of eczema.

The X-rays are also valuable in many other cutaneous diseases. Among these may be mentioned hypertrichosis, psoriasis, keloid, sycosis, ringworm and favus of hairy regions, and many of the hypertrophic dermatoses.

HEADACHE AND BACKACHE OF MENSTRUATION.

BY CHARLES A. DUNHAM, M.D., JACKSONVILLE, FLA.

So overwhelming is the majority of women and young girls to-day who suffer from "headache and backache" as the frequent precursor and constant accompaniment of the menstrual period that there is considerable danger of our being forced to the unwise and unsatisfactory conclusion that such symptoms may be but normal and physiological; and, if this view should be accepted, the physician doing so is in further danger of being led to the course of offering only such temporary relief as may be obtained from the use of sedatives and anodynes. Naturally, he will consider that his duty is done if he succeeds in obtunding the pains during the time in which they necessarily occur, thus enabling the patient to pass through the ordeal with greater ease and comfort.

But experience has abundantly shown that the victims of this fallacious mode of treatment sooner or later become slaves to the calmative effects of the drugs employed; and, not only are they afforded no really permanent benefit, but are continually rendered more sensitive to their sufferings. In short, the locking up of the secretions and retention of waste solids, resulting from the frequent taking of analgesic medicines, invariably aggravate the abnormal condition of affairs which has been at the base of their troubles from the outstart.

There are to be noted, of course, varying degrees of intensity in the sufferings of these women,—*e. g.*, from the two or three days of slight frontal or temporal headache to the week of intense *migraine*, with its accompanying vertigo, distressing eye symptoms, and gastric disturbances. In the former class of cases the processes of elimination (which are so essential at this time) are almost equal to the necessities of the occasion, and were it not for a slight constipation or other excretory check, not even the temporary headache and depression would be noted; in the other, however, the sewers of the system are more effectually blocked, the circulation becomes charged with obnoxious waste, and the serious chain of symptoms arises which indicates the retention of this debris in the blood, and which we now believe to be the true source of the evils we are considering.

To the painstaking study and investigations of Haig of London, more than to those of any other authority, are we indebted

for the knowledge which we now possess concerning the influence of uric acid in the causation of disease; and many disordered conditions of the system which were hitherto but little understood are now attributed to this factor, while the therapeutic results founded upon this knowledge have been very gratifying. It is now generally recognized and understood that migraine is caused by the retention of this substance in the circulation, and that the solvent and eliminative mode of treatment, which aims at its removal, is the only one which promises or effects a really permanent cure.

We are indebted to Haig for the important discovery that two or three days prior to menstruation there is a marked diminution in the excretion of uric acid; that the latter substance is retained in the circulation until the second or third day of the flow, when it is excreted in greatly increased amount. This is what normally happens when the organs of elimination are healthy and active and perform this added duty properly, the only symptoms to indicate this temporary retention being a slight headache and depression of spirits at the beginning of the period. But if for any reason elimination is imperfect, as is so frequently the case, uric acid remains to accumulate, and we have all the disagreeable symptoms which are known to arise from its presence in the capillaries in excess.

It is evident that in order to avoid this troublesome condition of affairs, it is the duty of the physician when confronted with such a case to aid the patient's organs of elimination in removing this waste substance from the body at the time when such aid will prove most efficient—*i. e.*, just previous to and at the beginning of menstruation. In short, it would seem that the increased work demanded of the liver, kidneys and bowels at this interesting physiological period is often greater than can be satisfactorily performed, and, as a result of this partial failure, we meet with the many symptoms indicative of the presence in excess in the blood of waste toxins of the uric acid type.

To illustrate the value of the *solvent and eliminative* mode of treatment in these cases, and the marked therapeutic advantages it possesses over the older palliative means usually employed, we cite briefly here the clinical outlines of a case of menstrual "sick headache" recently treated by both methods; to wit:

Mrs. W., aged 32, a slender brunette of decided nervous temperament, married and mother of four children, had for several years complained that for three or four days prior to each monthly period, she began to suffer intense headache, which warned her of her approaching sickness, and which necessitated complete withdrawal from all household duties. She was obliged to retire to a darkened room and remain in bed, while absolute quiet reigned. At the beginning of the menstrual flow, gastric disturbances arose (vomiting, etc.), the head symptoms increased in virulence, the entire surface of the body became cold and the patient relapsed into a semi-comatose condition alarming to her friends as well as to her physician. Vigorous rubbing of the limbs and body was always resorted to as a necessary means to restore what appeared to be "suspended animation." Brandy and the usual restoratives were applied.

The patient would recover from one of these attacks or seizures, remain in a very weakened condition for a short time and suddenly relapse into another attack lasting for an hour or two. After remaining ill in this way for about a week, the patient, upon the gradual lessening of the menstrual flux, would cease to have further attacks, but still remain very weak for two or three days. Upon recovery, she went about her household duties as usual for a fortnight, only to repeat the same experience at the coming monthly period.

The treatment in this case had consisted in the taking of analgesics (antifebrin, etc.) at the onset of the headache, drugs of this character seeming to be her only refuge from the intense suffering at this time. After the commencement of her "spells" attention was directed solely toward restoring consciousness and feeling and an impeded circulation. It was evident, however that some rational course of treatment should be adapted between the attacks to prevent their recurrence, as the patient was extremely nervous and her general physical condition undermined. The chief symptoms of which she complained between times were constipation and occasional headaches.

After several years of this suffering, and many changes in the treatment at the hands of various physicians who had been consulted, the diagnosis of migraine was made and the solvent and eliminative mode of treatment was adopted. Instead of obtund-

ing the pain by means of drugs which paralyzed nature's efforts at eliminating toxic waste, it was decided to directly aid in these efforts by stimulating the natural processes of excretion and employing a solvent which would render the removal of the urates prompt and certain; for it was now believed that the serious symptoms in this case were entirely attributable to the retention of colloid urates in the circulation and consequent choking up of the capillaries.

A day or two prior to the time of the expected headache she was given, the first thing upon arising in the morning an hour before breakfast, a teaspoonful of thialon dissolved in a glassful of hot water, which dose was repeated at two-hourly intervals until four teaspoonfuls had been taken. This caused copious evacuation of the bowels and well-marked diuresis. For the ensuing three or four days only the single morning dose was taken. Though menstruation had now begun, yet the alarming "spell" which had always hitherto accompanied it had now degenerated into a slight headache and some vertigo. She passed through the dreaded week with nothing more serious.

The same plan of treatment was adopted at the next period, while occasional doses of the solvent were taken in the interim, sufficient to cause fairly free movement of the bowels. The result was even more satisfactory than before. A mild headache was the only symptom. This plan has since been followed regularly for the past three years, and during all that time the patient has failed to suffer one of her old attacks—passing through the monthly ordeal with comparative ease and comfort.

Accident Insurance in Berlin.—In the further working out of the industrial accident insurance in Germany, the edict has recently been passed that the family is entitled to an indemnity where the victim of an accident contracts a fatal infectious disease in the hospital to which he has been transported. The regulations assume that the danger of infection is greater in a hospital, and that the subject is less resistant on account of the traumatism, so that the latter is indirectly responsible for his death.—*Jour. A. M. A.*

EXTRACTS.

ERYSIPELAS, CAUSES AND TREATMENT.

BY. T. H. MANLEY, M.D.

What do we understand by erysipelas?

The ancients confounded erythema, eczema and a host of other cutaneous affections under this head, but for the past century or more its essential features have been only embraced in the definition of the term. Nevertheless there is by no means yet a common consensus of opinion as regards its etiology or pathology. It was thought well, in this connection, to briefly quote the definition of the malady as set forth by a few of our best-known authorities, to-wit, as follows:

Larry: Erysipelas depends on predisposition and local influences.

Campbell De Morgan: There is no doubt now but erysipelas begins in the blood, and manifests itself in altered local conditions with a general febrile reaction.

Abernethy: It is the state of the constitution which determines the character of the local disease. I'll be hanged if erysipelas is not always the result of a local and disordered state of the digestive organs.

Fergusson: Erysipelas is a treacherous, uncertain malady. It bears a close relation to the ordinary type of severe inflammation.

Bilroth: I freely admit my inability to prove that erysipelas is a specific poison. It may develop in the body from substances which have no relation to extrinsic influences.

Volkman: A local disturbance dependent upon the influence of a special poison.

Heckteon: Erysipelas is due to a wound implication, caused by the inoculation of the specific streptococcus erysipelas.

Senn: Erysipelas is always traumatic and dependent on the specific streptococcus.

Nothnagel: The disease is due to the introduction of the well-known organism into the skin or mucous membrane.

Grünwald: Erysipelas begins preferably in some insignificant abrasion of the surface, and is probably propagated more by fission fungi already in the body than by freshly imported germs.

Some of us who have seen considerable of this disease were impressed with a belief that pathological conditions of the system were a factor in the etiology of this malady. Let us see how far we are in accord with our more modern authorities on this point; and how far the doctrine of Fehleisen is supported, that only one specific coccus introduced through a wound can produce the disease,

Delafield and Prudden deny any specific properties to Fehleisen's microbe, and say: "The most common excitant cause of erysipelas is the streptococcus pyogenus; this was thought by Fehleisen to have a definite relationship to the disease, but it is now proven identical with the ordinary streptococcus." (Handbook of Pathology, p. 185.)

In the *Courier de Medicine* for September, 1902, we find the following: "Marmorek claims that all pathogenic streptococci are identical. He bases his claim on three common characteristics that he has found present in all the bacteria taken from forty-two diseases. These peculiarities were: The production in vivo of hemolysis in rabbit's blood, the inability to grow upon a filtrate of their own cultures, and the immunization of animals by Marmorek's anti-streptococcic serum. The immense amount of labor in trying to separate different species of streptococci is, therefore, wasted, and clinicians will be compelled to find some other excuse why the anti-streptococcic serum does not cure."

Fehleisen: Erysipelas is now indisputably proven to depend upon a scientific micro-organism, the streptococcus erysipelatis,

Crocker: Erysipelas may be produced by either the streptococcus or the staphylococcus; pus organisms are the *fons et origo mali*.

Warren: It is a specific disease dependent on trauma and a specific streptococcus.

Hajek: Erysipelas may be produced by any of the pyogenic organisms.

Cornil, Babes, and Sternberg: The morphology, growth and action of the streptococcus of erysipelas and suppuration are indistinguishable.

Weichselbaum: The streptococcus-erysipelatic cannot be discovered neither morphologically nor by cultures from the streptococcus of suppuration.

Unna: Erysipelas is one of the acute dermatoses.

Osler: Erysipelas is a widespread affection endemic in most instances and at certain seasons of the year. We are as yet ignorant of the atmospheric or telluric influences which favor its diffusion. The specific agent in the disease is the streptococcus.

Watson Cheyne: A contagious disease characterized by a peculiar spreading inflammation on the skin or mucous membrane. Its cause may be local or general.

Rosenbach: Erysipelas is a special inflammation of the skin, occurring with a complication of trauma.

In the etiology of the malady we note the most remarkably divergent views. For example, we find Senn asserting that "An infection atrium, there must be, for the existence of the specific germ . . . there is no such thing as spontaneous or idiopathic erysipelas." While an equally eminent authority, as we have seen, Osler, "The disease is endemic," moreover as we see there is a widespread divergence of opinion on the question of a specific streptococcus; such well-known pathologists as Eiselberg, Bonnome, Bordini, Passet and Simone deny specific organism. Jordan found that he could artificially produce erysipelas in a rabbit's ear, not only with any of the streptococci, but with the staphylococci, the pneumo-coccus and the bacteriumcoli.

Is erysipelas contagious—communicable from one individual to another, in the sense that various of the febrile exanthemata certainly are?

This might seem a preposterous question in these times of swift quarantine or sequestration of cases by the authorities. But boards of health, in some instances of late, have been only too prone to base their tenets too exclusively on bacteriology rather than more definite and rational lights of clinical medicine.

Stellwagon makes the unsupported assertion that "the disease is both infectious and contagious to a marked degree at times." Graves held to the doctrine of contagion; but the cases he cited to support his views, rather pointed to a type of infectious gangrene, and not erysipelas.

Emile Boix, while he held to the contagion of the malady as the cause observes that the condition, however, is the *sine que non* of all infection; the temperament is indispensable, for often

after a long sojourn of many cases of erysipelas in a ward with others, who have herpes, ulcers or wounds none are affected."

Von Ziemmsen observes: "The disease is an acute infection; the contagiousness of it is not great."

Blodget, of all modern writers, goes to absurd extremes, an unequivocal victim of the germ-mania. According to him: "The contagion is the simple, inevitable and indispensable cause of the disease; it is always necessary that there should be a door for the disease." Now, an endemic disease is not contagious, and as "contagion" is a disease acquired only through the respiratory or digestive canal, why an atrium, or even a little door? Thousands and tens of thousands knock, puncture or lacerate themselves daily, oblivious of erysipelatous infection; and among the large number of cases investigated by myself, since the "trauma" theory came into vogue, in no single instance has the patient been conscious of any description of injury; nor indeed, could I ever find the trace of a wound even with the aid of a magnifying lens.

Some allege that an erysipelas may spread from an individual in any stage of the disease to the healthy, nay, that it may seize on chronic sores or surgical wounds from one the subject to the malady. If this proposition could be established on irrefutable grounds, then the greatest possible precaution should be observed in isolating every case, that a household escape the contagion, that the inmates of a large institution may not be stricken down, and in hospitals, that surgical wounds may not become the seat of an erysipelatous infection.—*The Medical Examiner and Practitioner*.

Validity of License Tax on Healers.—The Supreme Court of Kansas holds valid, in the case of *Steiner vs. Liggett*, a city ordinance imposing a license tax of five dollars per day on magnetic, psychic or other healers, holding that there was statutory authority conferred on the city to require a license from anyone engaged in the calling or profession of magnetic, psychic and natural healing.—*Jour. A. M. A.*

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EDITORIAL.

LET THE GALLED JADE WINCE.

It would seem that a number of small-bore medical journals have had their bile stirred by the fact that they make little or no money, and that the large medical weeklies thrive and grow prosperous. A large proportion of these envious medical editors are particularly harassed mentally by the fact that the *Journal of the American Medical Association* has become such a pronounced success. It has forged to the front in a manner which has become a source of just pride to the members of the Association and an honor to its editor, who has so well directed its affairs and made of it what it is to-day. The JOURNAL is both pleased and gratified to see this, and certainly has no grounds for just criticism of the methods employed, as they are strictly business-like, and the results which have been attained certainly show that they have been successful. The further fact that Dr. Simmons, the managing editor, has been re-elected to his onerous position is a further proof that the methods he has

employed have been approved. He has been indefatigable in his efforts to increase the circulation of the *Journal* as well as of the membership of the Association, and in both of these he has been successful. He is not content with the amount of success which he has achieved, but is ever striving to do better. That he has made the *Journal* better than it had ever been is acknowledged by everyone. This is acknowledged by even his most active and bitter opponents. That upon which they base their opinions is a subject which shows how puerile their efforts are.

As an example of the dissatisfaction manifested by some editors, we quote from the Wisconsin *Medical Recorder*, which says: "The American medical profession is proud of its great society, the American Medical Association, but there are criticisms in the air which indicate a growing dissatisfaction which will weaken the society. The Association is really controlled and managed by a small coterie of men. Recently it appeared that they were managing the Association for their own personal benefit, and this is something which, if continued, will not be tolerated in this country. The lack of interest in some of the smaller societies is due to the fact that the few run them without allowing the majority a voice. The tendency of the American Medical Association is to make it subordinate to a great publishing business conducted for the benefit of the few." The fatuity of the assertions made in this editorial is so apparent that it would be loss of time to consider them separately and show the lack of logic which characterizes them. But one word. If a majority permits itself to be governed by a few it certainly should not complain. The majority can always crush the minority, and, if it does not do so, it has no one to blame but itself.

Dr. E. C. Register, in an editorial in the *Charlotte Medical Journal*, says: "As a member of the American Medical Association, I don't believe that it would be amiss or improper in any sense, or an injustice to anyone, to say that the *Journal of the American Medical Association* should not be the greatest advertising medium for proprietary medicines in this country.

As long as this policy of the *Journal* prevails evidences of prejudice against it will be in evidence. When they make the advertising of the proprietary medicines an insignificant fea-

ture of the *Journal*, or, better still, do away with it altogether, then, and not until then, will the name of the Association journal create a different murmur from that described by Dr. Culbertson, or cause the applause that it in many ways deserves. I believe that a policy of this kind would be a help to the *Journal's* great editor and his proficient assistants, and enable them to do better and more acceptable work."

We are sorry to see our esteemed cotemporary take this stand, when he is not only willing but anxious to publish all the proprietary medicine advertisements which he can get. We have a number, and we hope to get more. The manufacturers of these products are honorable business men, and the best medical journals publish their advertisements. And these journals are ethical and independent—more so, in fact, than a lot of inferior journals which cannot obtain the advertisements which they pretend to despise by assuming a purely ethical sort of stand. Of them, we can only say, "let the galled jade wince." A prosperous publication has no time or space to waste upon idle vituperation, to which no attention is paid by anyone but a few "soreheads." As the *Detroit Medical Journal* says very pertinently: "We fail to see why the growth of the Association journal should cripple independent journalism, so long as its advertising rates are maintained in proportion to its increasing circulation." The conclusion of the editorial in the same journal voices our sentiments and we heartily endorse it. It is as follows:

"As for ourselves, we shall publish an up-to-date practitioners' monthly, ethically clean always, so long as we have the support of the profession in our neck of the woods. We are striving to make it worthy a place on the table of every medical man who reads anything."

We hardly suppose that the Association will lose any members, or the *Journal* any subscribers or advertisers, as the result of the spleen of a few medical journals of the third class. All those of the first class will certainly support the *Journal* with their influence and good will.

BOOK REVIEWS.

Infectious Diseases. Their Etiology, Diagnosis and Treatment. By G. H. ROGER. Translated by M. S. GABRIEL, M.D. 8vo. pp. 874. Illustrated with Forty-three Engravings. [Philadelphia and New York: Lea Brothers & Co. 1903. Price, \$5.75 net.

The author of this treatise has had unusual opportunities by which he has profited much. A keen observer, he has not permitted any case to pass by unnoticed, and with practically unlimited clinical materials offered to him it will be readily understood that this, aided by his experimental work, easily led to the elaboration of a work which is universal in its scope and classic in its treatment. In the book before us there is hardly a disease which is not considered, and the manner in which this is done is thorough and chiefly concerned with principles. The author has very well succeeded in reconciling any apparent antagonism between experimental research and clinical observation and it is in this very feature that the great value of the work before us lies. The author is one who has been practically unknown in this country and in fact to all who have been readers of English books exclusively. It is by these that the present book will be hailed with delight as it will enable them to have an opportunity of reading one of the leading French writers upon the broad subject of infectious diseases. He has considered the entire range in a systematic manner and in one which is analytic as well as thorough. His book is written in such a manner that hardly any chapter can be taken alone and considered complete. All the chapters lead the one to the other and are introductory to and interdependent upon one another. Once begun the reading of the book will not be discontinued until its end has been reached.

With true philosophical directness Prof. Roger uses the simplest methods in unfolding his subject. After first studying the pathogenetic agents, he considers their distribution in nature, the conditions under which they attack man, and their mode of invasion. The effects of these upon the body and the matters upon them are taken into consideration. Diagnosis, prognosis, and treatment, both preventive and curative are treated at length, and it is this practical consideration of these subjects to which ample space is given which will recommend the book to those who are desirous of what they are pleased to call the practical. The fact that the author has given his personal attention to more than 10,000 patients, suffering with contagious diseases, during a period of five years in the Paris hospitals is sufficient evidence that these subjects receive proper consideration at his hands. His opportunities at the

Hôtel Dieu and the isolation wards of the hospital of Porte d'Aubervilliers, to which all cases of contagious disease occurring in Paris are sent, have been very great and he has very widely profited by them. He takes a keen delight in grappling with the problems which are presented to him and he is fully aware of the strength which he possesses and which he can bring to bear upon them. Some parts of the book deserve special attention. These are the influence of infection upon the various organs of the body. Among his more important researches upon which he dilates are those in experimental appendicitis; pseudotuberculosis; variola, and the vesicatory test. A particularly excellent chapter is that on the pathology of fevers and the defences of the organism against infections including a consideration of immunity.

Congenital infection and heredity is very well discussed in a chapter which is followed by a very thorough chapter on the diagnosis and prognosis of infectious diseases. The therapeutics of infectious diseases occupy nearly one-fourth of the work and it is here that the author has shown his advanced thought and given us the results of his enormous clinical experience. The concluding chapter is on the hygiene and prophylaxis of infectious diseases and in this chapter the author gives us the "ounce of prevention" which is of the greatest value to the individual and to the community. We could continue to call attention to the various valuable features of this treatise, but the best advice that we can give is to get a copy and read it.

The publishers have made a handsome volume of this work, which is done in their well known finished style. The medical profession certainly owes them its thanks for having made this excellent treatise available to them and the translator has unquestionably acquitted himself of his task in a very creditable manner.

Diseases of the Skin. An Outline of the Principles and Practice of Dermatology. By MALCOLM MORRIS. New Edition. 12mo. pp. 642. With Two Colored Plates and Fifty-eight Plain Figures. [Chicago: W. T. Keener & Co. 1903. Price, \$2.50 net.

This book is one which has been deservedly held in high esteem by dermatologists of this country and of Europe. The author has been a consistent worker in his chosen field and has done much original work, both theoretically and practically, in skin diseases. In fact, he has become so prominently identified in dermatology in England, that it may be safely said, that he occupies to-day the position of *facile princeps* among British dermatologists. Whilst the present work does not aspire to the dignity of a treatise on the subject with which it

deals, it is certainly full enough to prove satisfactory, even to those who limit their studies and practice to skin diseases. The author's idea has not been so much to write a large work, as a good one, and in this he has certainly succeeded. Whilst the book appears rather small at a casual glance, a careful examination of its contents will show that it is full and no essential point has been missed in its writing. We are much pleased with it, and more especially of the author's plan of abandoning the plan of so many, of devoting space to a description of the anatomy and histology of the skin, subjects which are better treated in other works, as well as the description of lesions and such other primary matters which should find no room in a book on the diseases of the integument.

That which is much more to the point is a consideration of principles. Thus the author introduces his subject with a chapter on the pathology of the skin, which is followed by a short consideration of the principles underlying classification.

The next chapter, which is a most valuable one, is on the principles of diagnosis, and he makes this very clear, more especially to the practitioner and student who are in much need of such instruction. Seven chapters are then given on affections of the skin dependent on nerve disorder, and the author has certainly shown a due appreciation of the importance of dermatoneuroses. After this we have a chapter on artificial eruptions, followed by two on eczema, which are well considered and give an excellent review of the author's knowledge and of the literature of this disease. After a chapter each on psoriasis and pityriasis come three on local inoculable diseases, including animal and vegetable parasites, and other micro-organisms. General inoculable diseases are considered in three chapters and are followed by diseases of skin-glands and epidermic appendages. New growths, benign and malignant, occupy each one chapter, and these are followed by the concluding one on malformations.

This book is sound in its teachings, in the main, although here and there some exceptions might be taken, as when he states that *plica polonica* is always due to filth and animal parasites, as the reviewer and others have seen cases in which the utmost cleanliness prevailed and which were, in reality, examples of neurodermal affections. The author thinks but little of general treatment in psoriasis, an opinion shared in by many and denied by as many more.

This little book is about as clean cut a text-book as any one could demand, and as a reliable guide to any physician we can heartily recommend it. In fact, we would advise all to possess a copy as they will often have occasion to consult its pages with profit to themselves and to their patients. We are more than pleased to see that the author has decided to write this

new edition, as it was called for, and he was thereby enabled to bring his book up to the date of the latest advances, which have been many during the past ten years.

The publishers have been very liberal in the matter of illustrations, although but two colored plates are given. The printing is excellent upon very good paper and the binding is of the finest. Another thing done by Messrs. Keene & Co., has been the reduction of the price to a figure which places the book within the reach of all. We can safely promise them a large sale of this excellent and meritorious work. O-D.

Progressive Medicine.—A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., assisted by H. R. M. LANDIS, M.D. Vol. IV. December, 1903. 8vo. pp. 444. Diseases of the Digestive Tract and Allied Organs: Liver, Pancreas and Peritoneum—Anesthetics, Fractures, Dislocations, Amputations, Surgery of the Extremities, and Orthopedics—Genito-Urinary Diseases—Diseases of the Kidneys—Physiology—Hygiene—Practical Therapeutic Referendum. Illustrated. [Philadelphia and New York: Lea Brothers & Co. Price, \$2.50 a volume; \$10.00 a year.

We once more have the pleasure of calling the attention of our readers to this, the concluding volume of *Progressive Medicine* for 1903. We have had occasion in a number of previous instances of pointing out the excellent features of this publication, and the number before us is certainly keeping up the high grade of excellence which has been established and kept up for several years past. We can point with unalloyed pride to this finished review of progress in medicine and surgery, and if any criticism were to be made of it, it is that the quality of the contents of each volume has been continually improving, and the rare discrimination made by the contributors, the masterly way in which they have reviewed literature, and the excellent editing, are all much above the average.

In the review of Diseases of the Digestive Tract and Allied Organs, Dr. John C. Hemmeter very properly gives the greatest prominence to diseases of the stomach, of the intestines and of the liver. Diseases of the pancreas receive more than ordinary attention, and very justly so, in view of the fact that our knowledge of these is daily becoming greater.

Dr. Joseph C. Bloodgood writes a most interesting chapter on anesthetics, fractures, dislocations, surgery of the extremities, and orthopedics. He devotes quite some attention to fractures, but the bulk of his contribution is on tumors, benign and malignant. This is well illustrated, and is for the most part composed of original observations of the author. He writes in a most interesting and instructive manner on the sub-

ject, so much so that anyone beginning to read it will not cease until he has finished it. In fact, this portion alone constitutes a well-written monograph of some sixty pages, well deserving of attentive reading and study. Following this Dr. William T. Belfield gives a review of genito-urinary diseases, the major part of which is devoted to diseases of the kidneys. This includes a very thorough review of the advances made in the department of renal diseases. Many interesting as well as useful and practical points are brought forward, and these cannot but be of the greatest use to the practitioner whose available means of information from periodical medical literature is necessarily limited.

Physiology is the subject of the report on progress of Dr. Albert P. Brubaker, who very justly devotes a large share of of his attention to the blood. Dr. Charles Harrington considers the advances in hygiene in a very thorough manner, albeit the report is not a very long one. In this tuberculosis and typhoid fever come in for a goodly share of attention. The Practical Therapeutic Referendum of Dr. H. R. M. Landis, which concludes the volume, is very well written, and is a carefully considered review of the subject. The author gives reliable information on the action of the newer therapeutic agents, and makes this part not only interesting, but of the highest practical value.

The publishers have made a handsome volume of this, and we anxiously look forward to the first volume of next year, which will no doubt be as replete with good reading matter as every one has been up to the present time.

A Compend of Pathology. General and Special Students' Manual in one volume. By ALFRED EDWARD THAYER, M.D. Second Edition, containing 131 illustrations. 12mo. pp. 711. [Philadelphia: P. Blakiston's Son & Co. 1903. Price, \$2.50 net.

We have been much pleased to receive this book as it is a vast improvement on the first edition which was published in two parts. This division of the work led many to buy one part and not obtain the other, a very foolish thing to do as they are mutually complementary and interdependent. As it now appears it is a complete manual and one which every undergraduate in medicine should appreciate. As we had occasion to remark on a former occasion the author was thoroughly fitted for this work in view of the fact that he has taught pathology for a number of years and is thoroughly fitted for the task. The book before us whilst not being compendious is very thorough and the discussion of most points has been very wisely eliminated. What is given is reliable and the utmost confidence may be reposed in what the author

states. It is all set forth in such a plain way that any medical student can readily understand it. Not only this, but many a practitioner will find it a handy and useful book for reference, and teachers can make use of it as a guide to follow in giving their lectures. We could continue to point out its qualities but will first call attention to its contents.

The book is divided into two general parts dealing respectively with general and with special pathology. General Pathology is divided into chapters in which are considered disease in general, disorders of development teratology, disordered blood supply, disorders of metabolism both constitutional and local, inflammation and repair, neoplasms, animal parasites, vegetable parasites, infectious diseases, and methods, the part terminating with a chapter containing tables and statistics. In Special Pathology is included the circulatory system, the respiratory system, ductless glands, alimentary canal, alimentary glands, urinary system, reproductive system, nervous system, locomotory system, and artaneous system. The last chapter of this part deals with death by violence and poison.

A fair idea of the scope of this book may be formed from the cursory review of its contents given above. The author has permitted nothing to escape him and, with the excellent illustrations and plates used throughout the text, he has certainly produced a book which is vastly superior to the ordinary compends which are placed on the market. He has succeeded in producing a handy reference book such as is needed by both physicians and students alike. That the book will be a success goes without saying.

The publishers have produced it in a convenient size and the author has so thoroughly indexed it that a mere glance will convince any one of its usefulness and value. It is well printed in clear legible type and the illustrations in many instances are colored. A handsome edition has been produced bound in flexible leather, with gilt edges, and rounded corners. This would certainly make a handsome gift to present to a medical friend and we are certain he would deeply appreciate it. The publishers are certainly to be congratulated on publishing such a good book in such a handsome manner.

Precis d' Electricite Medicale. Par E. CASTEX. 12mo. pages 672. Avec 208 Figures. [Paris: F. R. de Rudeval. 4, rue Antoine Dubois. 1903. Prix, 8 francs.

MANUAL OF MEDICAL ELECTRICITY. By E. CASTEX. 12mo. pp. 672. With 208 Illustrations. [Paris: F. R. de Rudeval. 4, rue Antoine Dubois. 1903. Price, 8 francs.

This is a most thorough manual on the subject with which it deals, and the author has shown himself a master of the sub-

ject which he treats in a complete manner in all its phases. Beginning gradually with a clear exposition of the principals of electricity, he leads up to a thorough consideration of its practical applications in medicine. He demonstrates in a thorough manner his familiarity with his subject, something which we would certainly be led to expect in view of the fact that he has not only taught this at Rennes, but from the further fact that he is the chief of the service of electrotherapy and of radiography at the Hôtel Dieu of Paris, in fact, his capabilities as a physician have long since been demonstrated by him, and the work which he offers us is just the kind that we would expect of him, thorough and easily understood. Besides this the simplicity of the presentation of the subject appeals to his reader and large amount of information which he gives in a comparatively small space still further helps to increase the good impression which it makes. It is a manual which is destined to make its mark and to become popular with students and practitioners alike.

In order that a clearer conception of this manual may be formed, it may be stated that Book I. is devoted to fundamental principles, the galvanic current, faradisation and galvanofaradisation, the alternating sinusoidal current, currents of high frequency, static electricity, and thermic galvanocaustics. Book II. deals with electrophysiology which includes galvanisation, faradisation, voltaisation, Franklinization, electricity in microbiology, the dangers of electric currents, and the production of electricity by living beings. Book III. is a most important one and it deals with electro-diagnosis. Book IV. will be regarded by the practitioner of medicine as the most valuable in this manual in view of the fact that it deals with electrotherapeutics. In this part the author divides the subject matter into nine chapters each, one of which deals with the electrotherapeutics of the diseases of an organ or system of tissues. Book V. is on Radiology and, in this, the latest advances are mentioned and the author gives us the results of his large and varied experience in this department of electrotherapeutics as well as diagnosis. Book VI. which is the concluding one whilst not strictly appertaining to medical electricity is so closely allied to it as to deserve a place in such a thorough and well written manual. It is on phototherapy which, through the efforts of Finsen, bids fair to possess much importance.

We could keep on calling attention to the various good points of this manual but we have said enough of it to give the reader a fair idea of the scope as well as thoroughness of the book which is certainly fully deserving of a translation, and we have little doubt that before long, there will appear editions of it in other languages besides French. It is certainly deserving of it, and under proper editorial translations it can be made a book which would hold its own with any in its class.

Blood-Pressure in Surgery. An Experimental and Clinical Research. The Cartwright Prize Essay for 1903. By GEORGE W. CRILE, A.M., M.D., 8vo. pp. 422. Illustrated. [Philadelphia and London: J. B. Lippincott Co. 1903.]

The author of this monograph has again demonstrated his superior ability for original research in the line which he has chosen for his field of investigation, and the value of his work may be judged from the fact that he has won the Cartwright prize of the Alumni Association of the College of Physicians and Surgeons of New York. In all the experiments which are recorded, and which amount to 251, the animals were completely anesthetized, and but one recovery experiment was made. This essay is very thoroughly and methodically written. The methods of investigation and annotation are given, and followed by the protocols. After this we are given a summary of experimental data, which are in themselves of the highest interest.

The Clinical Observations on Blood-Pressure are elaborate and recorded with the greatest care, there being many sphygmographic tracing of the highest interest taken. All that has been mentioned is really preliminary to the subject proper. The author enters into *medies res* when he enters upon a study of changes in the blood-pressure during surgical operations. These latter embrace operations on the head, in the mouth, on the neck, on the thorax, on the abdomen, on the genito-urinary system, on the testicles, and on the spinal column; herniotomy, upon the extremities, and operations under cocaine. Then follows a summary, the argument, and a well-considered conclusion on collapse, the essay being closed with a final summary. Among the conclusions given in the final summary are: Surgical shock is an exhaustion of the vasomotor centres; in this cardiac stimulants have but a limited range of possible usefulness, and may be injurious. Saline infusion has a limited range of usefulness in shock, and therapeutic doses of strychnine are inert, whilst physiologic doses are dangerous or fatal. On the other hand collapse is due to a suspension of the function of the cardiac or of the vasomotor mechanism, or to hemorrhage. In this stimulants may be useful because the centres are not exhausted. Saline infusion may be effective in collapse, but the blood tolerates but a limited dilution with saline solution. The author also mentions methods for the resuscitation of apparently dead animals, the resuscitation lasting for some hours.

The whole essay is one deserving of close study by students of physiology, experimental investigation, and surgeons. They will find in it much food for serious thought and many data of the highest value in their work. We can recommend this work to students of the higher forms of biological investigation.

Essai Sur la Psycho-Physiologie des Monstres Humains. Un Anencephale. Un Xiphopage. Par N. VASCHIDE et CL. VURPAS. 12mo. Pages 294. Illustré. [Paris: F. R. de Rudeval, 4 rue Antoine Dubois, 1903. Prix, 5 francs.

AN ESSAY ON THE PSYCHO-PHYSIOLOGY OF HUMAN MONSTROSITIES. An Anencephalers. A Xiphopagus. By N. VASCHIDE and CL. VURPAS. 12mo. pp. 294. Illustrated. [Paris: F. R. de Rudeval, 4 rue Antoine Dubois, 1903. Price, 5 francs.

Every teratologist will be attracted to this monograph and the subject with which it deals, as well as the methods employed by the authors, will awaken more than ordinary interest. The examination of an anencephalus during its whole life, nearly two days, permitted the authors the elucidation of certain physiologic points, and to raise if not solve certain biologic problems. A minute study of the retina was made and demonstrated the existence and normal condition of that membrane. This observation of an anencephalus studied and methodically examined and in a complete manner for nearly two days is the first case reported in man and, on this account, it possesses particular interest.

In the second part of this study the authors report the case of the Chinese xiphopagus who was exhibited in 1902 by Barnum & Bailey. The biologic and mental states of the monstrosity are minutely studied by means of both the graphic method and of the tests employed in experimental psychology. Every circumstance in connection with them is noted. Some of the problems in connection with similar monstrosities receive here a clear and complete solution. Following this are given descriptions of the most interesting known and reported double monstrosities, most of which are borrowed from the remarkable work of Geoffroy St. Hilaire. In the last chapter is reported the history of the second xiphopagus exhibited by Barnum, the hindoo Radica Doodica, successfully operated on by Dr. Doyen. The operation is described in all its details and physiologic details are also given observed during life, during the operation, and after autopsy.

The appendix contains much of interest on double monstrosities, their death and other data which are for the most part derived from the classic work of Geoffroy de St. Hilaire. Throughout, the book before us breathes of a deep scientific spirit and is evidence of the serious work which has been done by its authors. The illustrations which are given are numerous and not only interesting but demonstrative. The book is a valuable one and should be in the library of every one interested in teratology on monstrosities.

Clinical Treatise on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By PROF. DR. CARL VON

NOORDEN Part IV. The Acid Intoxications. By Prof. Dr. Carl Von Noorden and Dr. Mohr. 8vo. pp. 80. [New York: E. B. Treat & Co. 1903. Price, 50 cents.

This little monograph is devoted to acid auto-intoxication, which was at first denied by the Germans, and in the rejection of which they are the most industrious at the present time. The author has examined more particularly into the acid forms of self-poisoning, as they are among the gravest forms of auto-intoxications. As among those of the most practical importance he includes those special perversions of metabolism resulting in the excessive production of oxybutyric acid, diacetic acid and acetone, which are of so much danger to diabetics, and which at times complicate the diseases seriously. The author considers the subject in his usual analytic manner, considering the question of where the acetone bodies are formed, their source, and pathological non-diabetic acetonurias. Diabetic Acetosis is considered quite thoroughly, and, in connection with it, the effect of fasting, and the acetonuria of diabetics. He concludes the monograph with therapeutic considerations which are very valuable. It may be stated that this number of von Noorden's series is of particular value from a clinical standpoint; and is to be ranked among the best so far issued.

A New Surgical Treatise on Diseases of the Prostate Gland and Adnexa. By GEORGE WHITFIELD OVERALL, A.B. M.D. 12mo. pp. 209-x. [Chicago: Rowe Publishing Co., 1312-34 East Washington St. 1903.

The author of this little monograph has certainly struck the keynote of what we are to regard rational medicine. He is opposed, and justly too, to the modern idea of operating upon every case in which the prostate is involved. He shows how these operations may be avoided, and successfully, by medicinal treatment, and, when this fails, by electrotherapeutic measures, which are but too little understood by the profession in general. The book is written in a conservative manner throughout, and the author points out the few conditions in which operative interference is an absolute necessity. In order to illustrate his points more clearly and render himself better understood, he gives the clinical histories of thirty-five cases, each one of which is instructive and interesting. In an appendix of some thirty pages he deals with electro-physics, electrolysis and cathaphoresis. This is of great help to the reader, and aids in placing the treating which the author advocates on a rational basis. The book is well printed on good paper and illustrated with twenty-six figures. It should be in the hands of everyone who practices or intends to practice in the line of genito-urinary diseases.

The Skin. Its Care and Treatment, according to the Michigan System. Teaching every Detail of this Important Work in a Simple, Concise and Practical Manner. 12mo. pp. 236. Illustrated. [Chicago: McIntosh Battery and Optical Co. 1903.

This little book, at first glance, might strike the careless reader as being simply a guide for the so-called "beauty doctors." It is in reality a well-considered little treatise on the proper manner of taking care of the skin and hair. All the details of the work necessary are entered into fully, and the directions are both excellent and rational. As the author states, dermatologists are too much engrossed with the study and treatment of the more serious skin diseases to pay any attention to pure cosmetics, and the profession in general has no time to devote to patients personally for this purpose. It is for this reason that they should encourage those who have made a serious study of this subject, and should furthermore recommend their patients who desire such treatment to those whom they know to be reliable. We would recommend practitioners to obtain this little book, as they will learn from it much to their advantage and to that of their patients.

QUIZ COMPEND NO. 19.

Compend of Diseases of the Ear, Nose and Throat. By JOHN JOHNSON KYLE, B.S., M.D. 12mo. pp. 280. Eighty-five Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1903. Price, 80 cents net.

This latest issue of Quiz Compend is a most excellent one. The author has presented us with an excellent condensation of the subject, not only of the greatest value to the undergraduate, but equally useful to the practitioner who is not a specialist in the branches whereof it treats. The book is well illustrated, complete and well written. It is a well-considered and well-balanced little book, and is certain to become popular directly it is known. In fact, it is a fit companion work for the other volumes of the well-known series of Quiz Compend. Like all of them, it is thoroughly up to date, and gives the latest improvements and advances in the treatment and pathology of diseases of the ear, nose and throat. We only regret that this little book appeared so late in the year, as its earlier appearance would have ensured a much larger sale for it. However, there is no doubt that its intrinsic merits are such that it will meet with the popularity which it so richly deserves.

The Physician's Visiting List (Lindsay & Blakiston's) for 1904. Fifty-third Year of its Publication. [Philadelphia: P. Blakiston's Son & Co. Price, \$1.00 net.

The Visiting List before us is so well known and so popular with the medical profession that it certainly needs no introduction at our hands. It is compact, well constructed, and generally superior. The present issue is the best one which has so far appeared, and is a credit to its publishers. The one before us is made for 25 patients a week, and costs but \$1.00. It is dated for every day of the year. Other editions are for more patients, and some again are on the perpetual plan and may be begun any day. We can heartily commend this visiting list as being both useful, handy and practical.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

Précis d'Electricité Médicale. Par E. Castex. 12mo. pages 672. Avec 208 Figures. [Paris: F. R. de Rudeval. 4, rue Antoine Dubois, 1903. Prix, 8 francs.

The Skin. Its Care and Treatment. According to the Michaud System. 12mo. pp. 236. Illustrated. [Chicago: McIntosh Battery & Optical Company, 1903.

The Physician's Visiting List (Lindsay & Blakiston's) for 1904. Fifty-third year of its publication. [Philadelphia: P. Blakiston's Son & Co. Price, \$1.00 net.

Essai Sur la Psycho-Physiologie des Monstros Humains. Un Anencéphale. Un Xiphopage. Par N. Vaschide et Cl. Vurpas. 12mo. pages 294. Illustré. [Paris: F. R. de Rudeval, 4 rue Antoine Dubois, 1903. Prix, 5 francs.

A Non-Surgical Treatise on Diseases of the Prostate Gland and Adnexa. By George Whitfield Overall, A. B., M. D. 12mo. pp. 207-x. [Chicago: Rowe Publishing Co., 1312-34 East Washington St., 1903.

Blood Pressure in Surgery. An Experimental and Clinical Research. The Cartwright Prize Essay for 1903. By George W. Crile, A. M., M. D. 8vo. pp. 422. Illustrated. [Philadelphia and London: J. B. Lippincott Company, 1903.

A Compend of Pathology General and Special. A Students' Manual in one volume. By Alfred Edward Thayer, M. D.

Second edition, containing 131 Illustrations. 12mo, pp. 711. [Philadelphia: P. Blakiston's Son & Co., 1903. Price, \$2.50 net.

Diseases of the Skin. An outline of the Principles and Practice of Dermatology. By Malcolm Morris. New edition. 12mo. pp. 642, with 2 colored plates and 58 plain figures. [Chicago: W. T. Keener & Co., 1903. Price, \$2.50 net.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Prof. Dr. Carl von Noorden. Part IV. The Acid Intoxications. By Prof. Dr. Carl von Noorden and Dr. Mohr. 8vo. pp. 80. [New York: E. B. Treat & Company, 1903. Price, 50 cents.

Infectious Diseases. Their Etiology, Diagnosis and Treatment. By G. H. Roger. Translated by M. S. Gabriel, M. D. 8vo. pp. 874. Illustrated with forty-three engravings. [Philadelphia and New York. Lea Brothers & Co., 1903. Price, \$5.75 net.

QUIZ COMPENDS No. 19.

Compend of Diseases of the Ear, Nose and Throat. By John Johnson Kyle, B.S., M.D. 12mo. pp. 280. 85 Illustrations. [Philadelphia: P. Blakiston's Son & Co., 1903. Price, 80 cents net.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., assisted by H. R. M. Landis, M.D. Vol. IV. December, 1903. 8vo. pp. 444. Diseases of Digestive Tract and Allied Organs: Liver, Pancreas and Peritoneum, Anesthetics, Fractures, Dislocations, Amputations, Surgery of the Extremities and Orthopedics, Genito-Urinary Diseases, Diseases of the Kidneys, Physiology, Hygiene, Practical Therapeutic Referendum. Illustrated. [Philadelphia and New York: Lea Brothers & Co., 1903. Price, \$2.50 a volume; \$10.00 a year.

Messrs. Lea Brothers & Co. announce that, with the new year, the annual subscription price of "*Progressive Medicine*" will be reduced from \$10.00 to \$6.00, and that for convenience in carriage it will divest itself of the heavy cloth binding. The volumes will each contain 300 pages, abundantly illustrated, and the work will continue to be issued under the same editorial management and with the same brilliant corps of contributors which have made it the indispensable assistant to the active, busy practitioner. The series of these volumes forms annually a practical treatise covering the entire domain of medicine and surgery.

The New Antikamnia Calendar. The Antikamnia Chemical Co., has again done itself proud in issuing its calendar for 1904. It is a veritable work of art. On one side we are given a calendar for 1904 and on the other the picture of a beautiful Sister done in colors in the highest style of art. The title is "Confidence" which everybody has in Antikamnia that has ever used it. We were treated to a pleasant surprise in receiving this work of art and we are certain that all physicians who obtain a copy of it will regard it as a welcome addition to their art treasures. Those desirous of obtaining a copy can do so by sending ten cents to the Antikamnia Chemical Co., who will be pleased to furnish same.

MELANGE.

The St. Louis Meeting in 1904.—In fixing upon St. Louis as the location of the thirteenth annual meeting of the Association of Military Surgeons of the United States, the Executive Council has complied with the clearly manifest wish of the membership. The Louisiana Purchase Exposition will cause a universal reduction in transportation, and will in itself be an attraction which will influence the attendance of a large number of visitors. The middle of October, selected as the date of the meeting, is the period when the Exposition will be at its best, and when the climate of St. Louis is always the most agreeable. The sessions of the meeting are to be held in excellent apartments, furnished by the Exposition authorities upon the grounds, and attractive social headquarters will also be furnished within the gates of the Fair. The scientific work will be confined to the six mornings of the week fixed upon, the remainder of each day being left open for sight seeing, securing a rare combination which cannot but inure to the great satisfaction of those attending the meeting.—*Jour. Ass. Military Surgeons of the U. S.*

For a Medical Press Exhibit at the St. Louis World's Fair.—

It is to be regretted, as a matter of history and of criticism, that no International Exposition has ever had an exhibit of the medical and scientific publications of America as a collective and comprehensive exhibit. A few scattered displays made by individual publishers, or included in the general newspaper exhibits, were all that served to represent the American Medical Press either at Chicago or at Paris. It is true that at Buffalo a commendable effort was put forth by the department of press and publicity to keep on file the current issues of American publications. This plan was only partially successful.

Mr. Walter Williams, through the Missouri Board of Commissioners, is preparing an exhibit of journalism, but this will embrace only the publications of this State.

The undersigned has secured adequate space at St. Louis, in the palace of Liberal Arts, with a view of making a display of American Medical publications which shall be commensurate with the importance of this class of work, and earnestly solicits the co-operation of editors and publishers of medical journals. Decisive action must be taken at once. The expense necessary to make this exhibit will be nominal. There is no charge for space, and the writer believes that the department of publicity will assist us in maintaining an up-to-date and comprehensive exhibit, where files of current issues of every medical journal in the land may be found during the progress of the great Fair. Full information will be furnished later, and all medical journalists are urged to communicate *at once* with the undersigned, with a view to united action and early endeavor, so that additional space may be secured, if necessary, to accommodate all who desire to join the bureau. CHAS. WOOD FASSETT.

—*Medical Herald.*

The First Case of Appendicitis.—Dr. Howard A. Kelly of Baltimore, according to the *British Medical Journal* of July 4, has greatly delighted our French brethren by giving the credit of the first clear description of a case of appendicitis to a French surgeon. Speaking in French to the Société de Chirurgie, he said that in the *Journal de Médecine, de Chirurgie et*

de Pharmacie, Mestivier in 1759 reported the following case: A man, aged 45, presented himself at the St. André Hospital, Bordeaux, for treatment of a tumor situated near the umbilical region on the right side. The surgeon made an incision, giving issue to about a pint of pus of bad quality. The patient died. At the necropsy the cecum presented nothing extraordinary. The same could not be said as regards the vermicular appendix. There was found a large pin, all crusted over and eroded. It may be inferred that this pin had been long imprisoned in the appendix, and had there set up the symptoms of the disease and caused death. A few years later, in 1776, a medical student, named Joubert Lamotte, published a report of a necropsy in a person who had died of tympanites. The author, after describing the symptoms of the illness, states that he had found in the vermiform appendix a foreign body as it were petrified, and in the cecum entire cherries. The necropsy having been made in September, the cherry season was long past. The cherries had, therefore, remained in the cecum, and the petrified body is the first example of fecal calculus. The first case in the nineteenth century was published by Jadelot in 1808. In 1812 a case was published in England, and in 1813 another in France by Wegeler. In 1824 appeared a paper by Louyer-Villermay, entitled "Observations to Serve for the History of Inflammations of the Cecal Appendix." In this paper are related two typical cases, in each with a necropsy. It is unquestionable, therefore, says Dr. Kelly, that to Louyer-Villermay belongs the honor of having been the first to point out the importance of appendicular inflammation. Three years later, in 1827, Melier published a memoir on the subject, based on a case of his own, and a study of the two others related by Louyer-Villermay, and on two new ones. He described the lesions in the appendix, and had even a notion of the possibility of surgical intervention. Melier had, unfortunately, no official position, and apparently little confidence in himself. His ideas did not find favor with Dupuytren, then the sovereign authority in French surgery; otherwise one of the most brilliant triumphs of modern surgery might have been achieved seventy years earlier than it was. This is one of the many examples of the disastrous influence of the superior person on the progress of science.—*Jour. A. M. A.*

MISCELLANEOUS NOTES.

Some Opinions of Dermapurine.—I am using the samples you sent me with the happiest results.

N. A. McCOY, M.D.,
Jackson, Tenn.

Pueblo, Colo., Dec. 29, 1900.

DERMA REMEDY CO.,
St. Louis, Mo.

Gentlemen:—Some months ago you sent me a bottle of Dermapurine and a cake of Dermapurine Soap. I used the samples in a case of psoriasis and in a case of dandruff with great success. I consider Dermapurine a fine remedy.

I am, yours truly,
C. B. CAHUSAC, M.D.

We shall continue our good words, as your Dermapurine Soap pleases us more than any other we have have tried, and we have tried many.

Success to you.

Vigorously yours,
EDWARD B. WARMAN.

—Editor of the Health Department of the *Ladies' Home Journal*; Author of "*Scientific Physical Training*," "*The Voice*," "*Philosophy of Expression*," etc.

Pointers on Antiphlogistine.—"For therapeutic efficiency in rapid resolution of the products of inflammation, Antiphlogistine is unexcelled."

"Expectation becomes realization in all cases of localized inflammation where Antiphlogistine is applied."

"Extension of the septic products along the vascular highways is prevented by the use of Antiphlogistine."

Rheumatic Dysmenorrhea.—

R	Cimicifugæ	2 ozs.
	Tr. Stramonii	½ oz.
	Tr. Tongaline	q. s. ad. 4 ozs.

M. Sig. A teaspoonful in water at meal times.

Sanmetto in Frequent Incontinence in the Aged, in Enuresis Nocturna in Children, and in Pre-Senility.—I have had good results from the use of Sanmetto in nocturnal enuresis of children; have also prescribed it in cases of frequent micturition in old people with marked benefit; also find it beneficial in pre-senility. I think it is a good medicine in all cases where anything of its nature is indicated.

S. W. BADGER, M.D.

Athens, Pa.

Improvement from Celerina After Removal of Alcohol.—After the removal of alcohol, Celerina, given in doses of from one-half to one ounce every four hours, is speedily followed by the most characteristic symptoms of improvement.

The Treatment of Nasal Catarrh.—Mannon (*Cincinnati Lancet-Clinic*) finds no danger whatever from the use of the nasal douche, provided ordinary care is taken and a proper solution is employed. The charge that post-nasal douching is prone to excite inflammation of the middle ear he does not find sustained. All leading specialists employ this method of treatment in the posterior as well as the anterior nares with equally good results. The doctor has had chronic nasal catarrh of many months' duration yield to douching when heroically employed. Listerine, to which a small quantity of bicarbonate of soda has been added, is his main stand-by. If hemorrhage is a controlling feature, he uses instead a saturated solution of tannic acid to each ounce of which ten grains of carbolic acid has been added. When the tendency to bleed ceases he returns to the listerine solution. Treated in this way, the most pronounced cases yield in three or four weeks, and are not prolonged by complications or sequelæ.

Rheumatic Pain and Fever.—In *The Medical and Surgical Bulletin* we find the following, under the caption of "Acute Articular Rheumatism," by Dr. E. G. Evans: "Salol is the best intestinal antiseptic we have, and Antikamnia as a pain reliever is, without doubt, unsurpassed; therefore the combination of these two remedies in the form of the well-known 'Antikamnia and Salol Tablets' affords us the ideal medicament for pain and fever in rheumatic conditions. Patients appreciate the fact that when administering Antikamnia you relieve the pain without giving them morphia, while the Salol acts as a germicide and antiseptic, tending to ameliorate generally the symptoms of the disease. Antikamnia and Salol Tablets (each tablet contains $2\frac{1}{2}$ grs. Antikamnia and $2\frac{1}{4}$ grs. Salol) are best given in doses of two tablets every three hours until ten or twelve tablets are taken during twenty-four hours. The patient's bowels must be kept open, and the diet should be light. Alcohol is contra-indicated, and water should be freely and frequently given. The bed covering should not be too heavy, but warm. Cold water packs, as well as hot fomentations, are very beneficial."

Glyco-Heroin (Smith) Compared with Codeine and Morphine.—Aside from the after effects of morphine, such as nausea, general lassitude, vomiting and vertigo, it has the disadvantage that the patient becomes readily addicted to it and chronic morphinomania occurs, especially in neurotic persons.

Codeine in its physiologic action resembles narcotine, though the narcotic stage is not so much pronounced. When administered in small doses intestinal peristalsis is promoted, while in large doses it produces diarrhea in consequence of complete relaxation of the intestinal muscles, owing to paralysis of the nerve centers governing the intestines.

The sedative action of codeine is unreliable.

Expectoration is not promoted by morphine or codeine, while Glyco-Heroin (Smith) acts as a stimulant to the respiratory center, and stagnation of the secretions is excluded.

Comparative doses of Glyco-Heroin (Smith) and codeine show the latter to produce nausea, vomiting and vertigo, while these symptoms are absent during the administration of Glyco-Heroin (Smith).

Unlike morphine preparations, Glyco-Heroin (Smith) does not constipate.

Glyco-Heroin (Smith) as a respiratory sedative is decidedly superior to the preparations of opium, morphine, codeine and other narcotics, as it is devoid of the toxic or depressing effects which characterize the latter when given in doses sufficient to reduce the reflex irritability of the bronchial, tracheal and laryngeal mucous membranes.

ST. LOUIS Medical and Surgical Journal.

Whole No. 758.

VOLUME LXXXVI.—FEBRUARY, 1904.—No. 2.

ORIGINAL COMMUNICATIONS.

WINDS AND LUNG DISEASES.

BY GEO. B. H. SWAYZE, M.D., PHILADELPHIA, PA.

A recent number of the MEDICAL AND SURGICAL JOURNAL quotes a page of very important remarks credited to the *Medical Press and Circular*, relative to the deleterious effects of winds on phthisis. Certain paragraphs merit renewed observation here, as preliminary to the brief analysis that the present writer repeatedly foreshadowed in various papers on causes of influenza and lung diseases, printed more than ten years ago. Excerpts from *Medical Press and Circular* article: "There is a curious conflict of opinion in respect to the influence of high winds in the causation of pulmonary tuberculosis. Great and persistent movements of air determine a comparatively high rate of mortality from phthisis. It would be difficult to deny prevalence of bronchial catarrh among inhabitants exposed to cold, damp winds. Morbidity does not appear to be determined by the direction of the winds, all great movements of air having approximately the same deleterious effects. Inhabitants of a windy district are tempted to keep doors and windows closed, creating a state of things strictly comparable to that met with in cities as result of overcrowding. The deprivation of fresh air determines the lethal proclivity. In winter the cost of heating leads to pernicious economies, entailing a dearth of fresh air."

The inference linked in these quotations as cause of increased fatality by phthisis is correct as far as it extends. But it stops significantly short of the actual lethal element that

assaults the vitality during the prevalence of high winds, and also attending all other atmospheric conditions that interrupt generous fresh air ventilation of the household. If bacilli were the active cause of lung disease: instead of constituting the natural scavengers developed by morbid material or *débris* of disease already induced by the assaults of toxic breathing-air in the lungs, winds alone could not operate as riotous destructives, not only in the path of phthisis, but specially also in sudden overthrow of so many lives by pneumonia, influenza, diphtheria and nervous prostration.

Philadelphia has had her rigid share of severe and windy weather during the late "cold wave." For the week ending Jan. 2d inst., the Bureau of Health reports deaths from pneumonia, 95; from bronchitis, 14; from consumption of lungs, 62. As correlative data I also quote from Philadelphia Health Bureau report, made during a rude, blustery month, week ending March 14, 1903: Died from inflammation of the lungs, 102; of bronchi, 11; of consumption, 57. Now, by contrast of fatal cases in close house air in rude winter and open house and work-day air in summer weather, I quote a convenient Health Bureau report for week ending July 29th: Died from inflammation of lungs, 23; of bronchi, 3; of consumption, 51. This showing gives markedly less difference in the fatality of phthisis in a season of open, sanitary house air and season of closed vitiated house air. But the fact doubtless remains that the actual take-off of the chronic consumptives and sundry cases of acute disease is more liable during the re-buffs and vital depression of windy weather for reasons that I now submit.

I have repeatedly noticed that after two or three days of unusually cold and blustery weather, crape comes numerously out at the doors to indicate as many concurrent deaths inside. If we turn critical attention to the inside house or business place conditions that impair health and hasten death, we may find there quite universally a specially toxic despoiler of the respiratory tissues, more or less active, and constantly dethroning vitality. Because of certain untoward circumstances blindly overlooked, groups of severe cases may be developed in a day or night, and scores of deaths may ensue in a week or fortnight. By the way, at the puzzle of these experiences, the stupid

quibbles about contagiousness of la grippe and lung diseases are started to pacify deluded conscience. But above, beneath, surrounding all other incidental agencies of diseases, there pervades the tangible fact that the gaseous carbonic oxide poison from burning fuels is evolved daily and nightly in almost every house inhabitable the world over. This gas, to varying extent, escapes into the breathing air of the home and business place, wherever situated. It is poured also into the outdoor air from chimney tops, factory and furnace smoke stacks, locomotives, that contaminate the breathing-air continually about them. These toxic fire gases are evolved alike from anthracite and bituminous coals, from coke, kerosene oil, illuminating gas, or any other fuel used, with the possible exception of electricity. When this carbonic or fuel gas is inhaled with the breathing-air of any place. It disorders the breathing surfaces, intercepts proper oxygenation of the blood corpuscles as they are pumped through the lungs, interferes with normal elimination of venous impurities, hence increases the toxic debris of the system, impairs normal nutrition of all the organs, prostrates nerve functions, arrests heart power. With impoverished and vitiated blood current, there is no stamina to health. Neurasthenias or neuroses and inflammations and presently lung disintegrations are bound to capture the victim.

Besides the ordinary fuel gases that are conducted into sleeping rooms, the burning of coal oil and common gas stoves, and the use of gaslights and lamps during the nights in sick rooms that are not ventilated to the out-doors, but add suffering and severity to the cases, and make liability to death more certain. In many houses the smoke and fuel gases channels or drafts are choked by obstructing obstacles, and the carbonic poison proportionately backed directly into the breathing-air of that house—possibly with one or more sick there or dying for the relief of fresh, pure air only. Drugs, in those numerous cases, never equal the efficiency of common sense by the medical attendant, who is supposed to comprehend the situation, A misplaced damper, a closed room haunted with poisoned air, a windy night, may and often do defeat the purpose of a doctor. I speak positively and earnestly on these points, because of their practical value and momentous importance in curing disease and saving lives in all critical cases,

where every defense to failing vitality needs be promptly availed of. I speak from practical knowledge, not from any mere theory.

This brings me to the winds. High winds forcibly cut their force and pressure across the open tops of chimneys, choking backward their draft, even often pushing downward in the smoke or fuel-gas channels until smoke (if there is any) and ash and combustion gases are pressed directly into the house air of homes and business places by what are known as "down drafts." But damp, heavy, cloudy, muggy weather, even without winds, interferes with chimney drafts, fire drafts, and produces a similar backing of the carbonic gases from burning fuels, but this more steady and less visibly. Country houses, standing alone, afford the winds greater play from every side; hence the direction of the winds makes no difference in the deleterious results. The air inside the house is poisoned the same, and the injurious gases are usually boxed into the local breathing-air by doors and windows being mistakenly kept closed. With their housed-in toxemias, deoxygenation, nerve depressants, throat and chest irritations and inflammations, weakening hearts, country homes and business places contribute to the same tragedies that haunt harrassed towns and crowded cities. Winds in themselves do not increase consumption, except through their effect in backing the toxic fuel gases into the breathing-air.

The New York and New England Association of Railway Surgeons.—At their thirteenth annual meeting of the New York State Association of Railway Surgeons, held at the Academy of Medicine, New York City, November 12-13, 1903, a vote was taken and unanimously carried to change the name of the Association to New York and New England Association of Railway Surgeons. This change will greatly extend the good work of the association, and the many benefits to the surgeons and railways in this territory should be mutual.

Place of meeting in 1904 is New York City. Officers elected: President, Dr. C. G. J. Finn, Hempstead, L. I.; first vice-president, Dr. G. P. Conn, Concord, N. H.; second vice-president, Dr. J. P. Creveling, Auburn, N. Y.; secretary, Dr. Geo. Chaffee, 338 Forty-seventh St., Brooklyn, N. Y.; treasurer, Dr. J. K. Stockwell, Oswego, N. Y.

SCANDALS AT THE LEPER SETTLEMENT OF MOLOKAI.

BY A. S. ASHMEAD, M. D., NEW YORK.

333 W. 23D ST., NEW YORK, December 14, 1903.

HON. THEODORE ROOSEVELT,

President of the United States.

SIR:—I beg leave to direct your attention to certain scandals at the Leper Settlement of Molokai. I have already had the honor to write you a letter, as follows:

NEW YORK, August 26, 1903.

HON. THEODORE ROOSEVELT,

President of the United States:

SIR:—I notice in the *New York Times* of yesterday, that Mr. B. H. Osterhout, Director of Charities, Porto Rico, now in Poughkeepsie, N. Y., and Governor Hunt, now in the Adirondacks, will call on you before their return to their posts, to discuss with you, the question of scandal at Cabras Island, Porto Rico: "The Superintendent of the Asylum has been suspended by the Acting Governor, Mr. Hartzell, because chickens and pigs raised by lepers were freely sold in the city of San Juan;" "Intercourse between the colony and the mainland has been permitted;" "Mr. Aldrich has been arrested on the criminal charge of transporting chickens from the leper colony, and has been fined \$50.00." "The Acting Governor has ordered all animals in the leper colony to be killed, and has declared that he will probe the scandal to the bottom, and that none of the guilty shall escape."

I beg to be allowed to inform you, that the actions of the Acting Governor, in this matter, from a leprological scientific standpoint, are most commendable. For it has been found, in Columbia, South America, a country scourged by leprosy (there are 30,000 cases there), that chickens allowed to feed on the refuse of leprosy infected habitations, transmitted the disease. Chickens were fed with pieces of leprosy tissue from the mutilated members of lepers, and their eggs transmitted leprosy. No other contact between the sick and the well persons, either immediate or mediate had occurred, and it was the opinion of the eminent leprologist, who investigated this question of contagion, that the germs had been transmitted by the chickens and their eggs.

Allow me the liberty, to take advantage of this opportunity, to question the wisdom of the permission given to the Molokai lepers, to sell their fish to the healthy settlements, not only of Molokai, but of the other islands of the Hawaiian group. All the lepers of Molokai are fishermen. They catch and handle with their diseased hands, thousands upon thousands of pounds

of fish, most of which is sold to the healthy inhabitants, who are, according to ancient custom, *raw* fish eaters. The report of Drs. Jordan and Evermann of the United States Expedition to investigate the Fish and the Fisheries of the Hawaiian Islands, (expert ichthyologists) says: "Fishing is carried on at the settlements by the lepers; the Board of Health purchases all the fish that are caught. Should the fishermen wish to sell personally to the people, they are permitted to do so. The fishermen are all lepers."

Now, there is no compulsory meat ration at the Molokai Leper Asylum, fish being given out to the lepers in lieu thereof. But surely all the fish product of Molokai is not eaten by the lepers themselves! Last year there were caught by these lepers (and by others perhaps), 284,336 pounds of fish by seine, bag net, spear, cast net, and line; most of the amount was caught by line, 144,298 pounds. The value of the catch was \$44,619. Surely the lepers did not eat that much fish. I beg to say further, regarding this last point, that fish can transmit leprosy, especially if eaten raw; and therefore, the lepers of Molokai, should not be allowed to sell their fish to the healthy communities. There are many healthy communities on the island itself, and these should not even receive the fish from leprosy hands. A milk and meat ration should be given to the lepers of Molokai, instead of their fish ration. In fact, lepers should not be allowed to eat fish at all, for fish eating (even cooked fish), predisposes to leprosy. To such faulty isolation methods as this, must be attributed the delay in accomplishing eradication of the disease, from the Hawaiian group.

Very respectfully,

ALBERT S. ASHMEAD, M. D.

(Author of Platt-Wanger Leper Bill and Member of Provisional Committee, Berlin Leper Conference.)

As regards the beef supply at the leper settlement of Molokai, to which allusion has been made, I beg to say that it was testified before the United States Senatorial Investigating Committee, that seven pounds of beef was issued as a ration to each leper per week, and that when the lepers chose the five pounds a week of salmon ration, to such persons no beef was issued. If they took fish, they could not have beef. Thus all the persons at Molokai did not get beef. It was also testified, that the butcher of the settlement killed five or six bullocks (according to size) twice a week, or ninety bullocks in two months; that would be forty-five (45) a month, one and a half a day, or ten and a half a week for the supply. As there are, on an average, one thousand persons at Molokai to be fed,

counting the lepers, the well-attendants, the superintendant's official family, etc., those ten and a half bullocks must yield each about seven hundred pounds of dressed beef. We leave out of the calculation the one-half bullock as a stand-off, for those lepers, who chose salmon (or fish), instead of the meat ration.

I am now in receipt of a letter from the Schwarzschild and Sulzberger Company, of New York City, in answer to my inquiry relative to the percentage of dressed beef that would be furnished by cattle, that is ordinary (not prize) cattle, as it is reasonable to believe those of Hawaii are.

Mr. Kuckheim informs me that the best beeves that come to the New York market, weigh on the hoof, 1,300 or 1,400 pounds. In the dressing of them, about one-half the weight is lost. Thus, in Hawaii, the cattle would have to be as good beeves as our best, to furnish seven hundred pounds each of dressed beef, to allow seven pounds a week to each person at the leper settlement, or seven thousand pounds a week for all. In Mr. Kuckheim's opinion, judging from what he has heard of them, the Hawaiian young cattle at Molokai would weigh on the hoof about seven or eight hundred pounds, not over nine hundred pounds any of them, and this last figure for only a few (old cattle nine or ten years old weigh very light). This would allow at the outside, instead of the seven thousand pounds per week required, only, at most, 4,500 pounds, or as is more likely to be the case, only 3,750 pounds. This is not enough to give seven pounds of dressed beef a week to each leper, as Dr. Cooper, President of the Hawaiian Board of Health would have us believe is faithfully done. I have not considered the weight of *inferior* cattle at all. Yet it is probable that some of the "bullocks" slaughtered there are old cows or old cattle.

To this letter I received a reply from the Secretary of the Interior, Mr. Hitchcock, saying, that copies of it had been transmitted to Governors Hunt and Dole, respectively of Porto Rico and Hawaii.

In the course of time I received the following communication from Acting Secretary of the Interior, Mr. Ryan:

"Department of the Interior,
Washington, September 28, 1903.

Albert S. Ashmead, M.D., New York City.

Sir:—In further reply to your letter of the 26th ultimo, in

regard to the proper diet, etc., for lepers, addressed by you to the President and referred to this department for consideration, I transmit herewith for your information copy of a letter dated the 12th instant, received from the Governor of Porto Rico, to whom a copy of your letter was referred, in which he discusses the condition of the leper colony in Porto Rico; and after considering your suggestions, states that such changes have been made in the administration of the leper colony that no apprehension as to its proper management in future need be felt.

"As soon as a report is received from the Governor of Hawaii on the subject, a copy will be transmitted for your information.

Very respectfully,

THOS. RYAN,
Acting Secretary."

Enclosure :

" Executive Mansion, Porto Rico.

San Juan, Porto Rico, September 12, 1903.

" The Honorable The Secretary of the Interior,
Washington, D. C. :

" Sir:—I have the honor to acknowledge the receipt of your reference to this office, dated September 3d, of a letter written by Dr. Albert S. Ashmead of New York to the President, with reference to the matter of an alleged scandal in connection with the leper colony in Porto Rico.

" The Insular Government, among its other public institutions, has maintained for several years upon what is known as Cabras Island, a small island at the mouth of San Juan Harbor, an institution for the care and maintenance of lepers. The number of inmates has varied from 20 to 30 during that time, and we are advised that there are several other unfortunates who have not yet been transported to this institution, but we are taking all steps possible to effect their detention and transportation as soon as possible.

" Several weeks ago it was discovered by the Acting Director of Charities, who made a visit to the island, that quite a number of domestic animals, consisting of dogs, chickens, cats and several goats, were living on the island. There never have been, to my knowledge, any pigs there. At that time it is not believed that any of the animals living on the island had ever been transported to the main land, either for market or any other purpose. The Acting Director of Charities also reported to this office that the conditions surrounding the care of the patients were not good, that the degree of cleanliness which the disease requires had not been preserved, and a number of other delinquencies, including the failure of the Superintendent to keep the records of the case required by law. Upon my ad-

vice, the Acting Director of Charities immediately removed the 'practicante,' or assistant physician, who had immediate charge of the affairs on the island, and suspended the Superintendent, appointing in their places persons in whom we have great confidence. The 'practicante,' after his discharge, did convey certain of the chickens to the main land, for which offense he was arrested and punished by a fine of \$50. We have not been able to find what became of the chickens, but it is not believed that they were placed on the market.

"The Superior Board of Health, which exercises general quarantine control in the island, immediately directed the killing of all animals on the island, which was promptly carried out, and the new practicante and superintendent since that time have been engaged actively in correcting every form of complaint which has been discovered. Thorough cleansing of the quarters has been accomplished, ample clothing, bedding and food have been supplied, and the new officials are giving every attention possible to the care of the unfortunate inmates of this institution. The investigation as to the responsibility for the conditions so disclosed is being conducted by a committee of the Executive Council, which body has supervisory control over the charitable institutions, and upon their report proper action will be taken for the effectual reorganization of this department, as may be required.

"Replying to the suggestions of Dr. Ashmead, I beg to advise you that the lepers on the island have never been engaged in fishing, and no fish caught either by them or from the island has ever been allowed to approach the mainland. We are erecting signs upon the island warning all people not to come within 300 feet of the shores, and I do not think that fish is ever used as an article of diet on the island. It has been the constant policy of this government to absolutely isolate this island to the greatest possible degree, and no communication has been allowed except that which seemed absolutely necessary. So far as we can learn, there has never been, prior to the time mentioned, any chickens, eggs, or other articles brought from the island to the mainland, and we feel that with the present experience there need be no apprehension but that the affairs of this institution will be most carefully administered in the future.

Very respectfully,

CHARLES HARTZELL,

Acting Governor."

Mr. Haeselbarth, Director of Charities, Porto Rico, in charge of the lepers of Cabras Island, also wrote me a letter, in which he expressed the appreciation of Governor Hunt and himself for my communications. He stated that he "would make a close study of conditions there and throughout the island."

Evidently Dr. Cooper of Hawaii has wrongly interpreted my reference to Porto Rican leper affairs, when he says that I made charges against Governor Hunt's management of lepers. For my letter was commendatory of the Acting Governor, and I praised him, and it was so accepted by the authorities there. My criticisms were directed against the gross misdirection of Hawaiian authority over leprosy. The following is a letter which I published in the *New York Tribune*, Oct. 12, 1903:

LETTERS TO THE EDITOR.

HAWAIIAN LEPERS AND FISHING.

DR. ASHMEAD FORTIFIES HIS STATEMENTS IN REGARD TO WHAT IS DONE.

To the Editor of the *Tribune*:

Sir:—Replying to a late communication of Dr. Guthrie McConnell, pathologist at the Medico-Chirurgical College of Philadelphia, in which he disputes my statement that lepers at Molokai are permitted to catch, handle and sell fish to the Board of Health, which afterward disposes of them to the healthy population, I beg to submit to you the following proofs: In the preliminary report on the fishes and fisheries of the Hawaiian Islands by Drs. David Starr Jordan and Barton W. Evermann, published by the Bureau of Fisheries, Washington, in 1902, I read: "Fishing is carried on at these settlements (Molokai) by the lepers, three bag nets, valued at \$450, ten cast nets, worth \$100, and \$18 worth of lines being used. The Board of Health for the territory, which has charge of the settlements, purchases all the fish that are caught, provided the fishermen care to dispose of them at a uniform price of seven cents a pound, and distribute these in lieu of meat ration. Should the fishermen wish to sell personally to the people of the settlements, they are permitted to do so. The fishermen are all lepers."

In a letter which I wrote to President Roosevelt on August 26, I mentioned this matter, and gave further details as follows: "Last year there were caught by these lepers (and perhaps others) 284,336 pounds of fish, most of the amount—144,298 pounds—by line. The value of the catch was \$44,619. Surely the lepers of Molokai did not eat that much fish, 'in lieu' even of meat ration. Now, when we consider that most lepers have diseased hands and feet, it is evident that they should not be permitted to catch and handle fish that is intended to be used by healthy people. And this is especially emphatic when we know that Hawaiians eat many of their beloved fish—

amaama (mullet) and oio (bone fish)—raw.”

I beg further to say that this substitution of a fish diet ‘, in lieu of a meat ration” is a wrong to the lepers. Meat and milk are the proper food for lepers.

New York. Oct. 3, 1903.

ALBERT S. ASHMEAD, M.D.

On Dec. 5, I received the following letter with enclosures :

“ Department of the Interior,
Washington, Dec. 4, 1903.

Dr. Albert S. Ashmead, 333 W. 23d St. New York, N. Y.

Sir :—In further reply to your letter of August 29, 1903, in relation to the proper diet, etc., for lepers, addressed by you to the President, and referred to this Department for consideration, I transmit herewith for your information a copy of a report from the Governor of Hawaii on the subject, together with the accompanying enclosures.

Very Respectfully,

THOS. RYAN,

Acting Secretary.”

Kalaupapa, Molokai, Oct. 2, 1903.

Dr. C. B. Cooper, President of the Board of Health, Honolulu :

Sir :—I quote from the statement of Dr. Albert S. Ashmead, and follow with my comments :

“ In Molokai the Hawaiian lepers are allowed to sell the fish which they catch to the settlements which are healthy.”

The topographical position of the peninsula on which the leper settlement is situated is absolutely prohibitive of any outside intercourse. On the land side of the settlement is an impassible barrier, with the exception of one dangerous trail which is strongly guarded, composed of a mountain chain rising sheer from the settlement to a minimum height of 2,250 feet. This disposes of the possibility of taking fish out of the settlement by land.

There are no boats at the settlement, owned by or obtainable by the lepers, by which fish could be carried to the main portion of the Island of Molokai or the other islands. Finally, there are about 1,700 inhabitants only an Molokai, outside the settlement. There are no villages or markets.

Every outside inhabitant is immeasurably better situated to catch his own fish than are the lepers.

“ They catch and handle with the diseased fingers thousands of pounds of marketable fish, especially the mullet.”

Mullets are not deep water fish, and are practically not known at the leper settlement, as the water near the shore is hundreds of fathoms deep. I later will comment on the diseased condition of the fishermen.

“ Most of the products of these fisheries are sold to healthy inhabitants of the various islands, who, in conformity with a very ancient custom, eat them raw.”

Not a pound of fish caught by lepers is sold away from the settlement. There are fishing banks off another part of the coast of Molokai. Several attempts have been made to conduct a successful fishing business on the banks by gasoline-driven vessels from Honolulu. These are probably the fish the United States Fish Commission refer to. No lepers are connected with the business.

Numerous sharks so destroy the nets and steal fish from the lines that the business has been erratic and of doubtful profit.

All highly civilized races vary their diet with fish, and eat the scavengers of the sea, oysters and clams, raw, and much dried and cured but uncooked fish. The Hawaiian, likewise, eats some raw fish (dried fish), and is an expert in baking fish inclosed within leaves in the ground by means of hot stones.

"The report of Dr. Jordan and the United States Fish Commissioners says 'All the lepers are fishermen.' 'Fishing is carried on at the settlement by the lepers.' 'The Board of Health purchases all the fish that are caught.' 'Leprous fishermen may personally sell fish to the people.' 'The Board issues fish to the lepers at the asylum in lieu of meat.'"

A few of the lepers fish. No fishing is done at the settlement by lepers, except individually for individual consumption.

The Board does purchase such surplus of fish as the lepers may catch, and for the entire year of 1892 the total paid out for fish was \$2,260, of which less than one-quarter was paid to the lepers. The first six months of 1903, \$210.80 was paid for fish caught at the settlement, aggregating 4,216 pounds. From outside healthy fishermen 7,600 pounds, costing \$380.05, were purchased.

No person, fisherman or otherwise, is allowed to sell fish personally to the people.

The Board does issue a sensible, healthy and judicious ration of fish to the lepers, and lepers exclusively.

Fresh fish supply, in pounds, from January 1 to June 30, 1903, at the leper settlement, Molokai:

	Feb.	March.	April.	June.	Total.	Price.	Total amount.
Settlement.....	1,292	—	2,924	—	4,216	5c.	\$210 08
Halawa.....	—	2,270	—	—	2,270	5c.	113 50
Halawa.....	—	—	—	1,331	1,331	5c.	66 55
Halawa.....	—	—	—	4,000	4,000	5c.	200 00
Totals	1,292	2,270	2,924	5,331	11,817	5c.	\$590 85

Surely these figures demonstrate the absurdity of the assertion that "284,336 pounds of fish were caught last year at Molokai." I doubt whether there has been that amount of fish caught at the leper settlement during the last twenty years.

In regard to the question of fish being a medium for the transmission of leprosy, in consequence of being eaten raw, and citing the "carp of Japan," which is always eaten raw, and which feeds on mosquitoes, many of which have sucked the blood and sores of lepers," it might be well to call attention to the fact that no "light" or surface fish abound on the windward or leper settlement side of the Island of Molokai. This side of said island is a rockbound coast, with a sheer drop of hundreds of fathoms deep, and with the exception of a small cove (Kalaupapa Landing), no anchorage can be found. It is also a scientifically proven fact that the mosquito will not lay its larvæ in salt, ocean water, let alone the fact, as above mentioned, that the leper settlement is on the windward side of the island, and is exposed to a heavy swell, which breaks on the coast throughout the entire year. Consequently no "still water" can be found by the mosquito in which to lay its eggs.

"Fish caught near the leper settlement is unsafe for general consumption."

No fish brought to the Honolulu or any other market is caught nearer than forty miles from the leper settlement.

"To such faulty methods of 'isolation' we may attribute all the delay in accomplishing eradication of leprosy from the Hawaiian Islands."

This conclusion, by Dr. Ashmead, simply shows he is wholly uninformed, so far as the Hawaiian Islands are concerned, as to the subject on which he assumes to write as an authority.

Many of the lepers are but slightly tainted. The disease takes on many different forms, and is often on the clothed portions of the parties only, and but slightly marked. Many lepers are very strong and vigorous. Athletics are a favorite part of amusement and diversion.

What little fishing is done is mostly by the above described lepers. Not the least harm arises from the fishing done.

The Hawaiian has been an islander for ages, with the sea ever in sight. It is natural he should utilize his products and enjoy the pleasures of the tropical waters.

If an occasional leper chooses to do some individual fishing, he is simply amusing himself and passing idle time.

The Territorial government of Hawaii so completely cares for its leper wards, and so fully supplies their every need, that the Board of Health does not require of the lepers any work whatsoever. None are compelled to work. It would be better for the leper's own physical condition if more were willing to work. Those desirous of working are employed by the superintendent, and are adequately paid.

The Board is aware that the handling of segregated unfortunates is a delicate matter, and endeavors to leave no point open for factious criticism or comment.

What sacrifices the people of the Hawaiian Islands make for their leper charges can be better comprehended when I state that, pro rata, the sum is equal to the people of the United States expending over \$75,000,000 per annum on this one form of disease, if they were correspondingly afflicted.

The disease is confined almost exclusively to the Hawaiian race, and science, care and time will probably eradicate this disease from the islands. It is a slow disease—in fact, one of a lifetime—so we cannot expect sudden or striking improvements. The disease is slowly decreasing, as per statistics.

Very respectfully,

(Signed) J. D. McVEIGH,
Superintendent Leper Settlement.

From copy.

Territorial Board of Health Hawaii.

Honolulu, Hawaii, Oct. 6, 1903.

[*In re* Communication of the Department of the Interior,
received August 29, 1903, P. and M. Division, 4103 *Miscs.*]

[In answer quote No. 770.]

Hon. Sanford B. Dole,

Governor Territory of Hawaii, Honolulu, T. H.

Sir:—In reply to your request for information on the subject, the matter above designated, I would say that I am surprised that Dr. Albert S. Ashmead of New York should have made the statements contained in his communication without an attempt at verification, through proper authorities.

The Board of Health absolutely controls the leper settlement, and welcomes the investigation of men of recognized scientific, medical and humanitarian standing.

The leper settlement on Molokai is situated on a peninsula comprising some 6,000 acres, strikingly adapted for absolute segregation. On the land side the settlement is cut off by a sheer precipice, 2,250 feet in height at the lowest point, and rising to 4,000 feet. There is an extremely dangerous trail up this height, and over which it is impossible to transport anything. This trail is guarded.

There is but one landing, and that available only to the heavy surfboats used by our interisland steamers. This landing is shut off from any but authorized communication by being surrounded by a double line of heavy wooden barricades. Through this visitors may see and speak with their friends, but no contact or passing of articles is possible without permission. No individuals, supplies or articles can enter or leave the leper settlement except through this barricade and under the supervision of the proper officials.

The only means of communication is by a steamer under contract, under control of the Board of Health.

Except by written permission of the Board, no person is allowed to land or enter the leper settlement. Occasionally friends of the lepers are allowed to land by permit, and for the few hours' stay of the steamer see and talk to their unfortunate friends through the barricade.

Owing to the custom of the Hawaiians of intense embracing and kissing, the precautions taken against contagion are never relaxed.

For thirty miles this windward coast of Molokai is one precipice, against which the rollers perpetually break. There is but one landing.

Although Dr. Ashmead quotes Dr. Jordan and his associates of the United States Fish Commission as his authority the records of the Board of Health fail to show any permit to anyone connected with the expedition to visit the leper settlement on Molokai.

I attach and indorse as correct a statement by J. D. McVeigh, the superintendent of the leper settlement, refuting the charges of Dr. Ashmead.

The careful care given the lepers of the Hawaiian Islands by the local government should receive the commendation of every accurately informed authority. The disease is as old as history, and its amelioration and eradication are earnestly sought, nowhere more than in the Hawaiian Islands.

Sensational assertions carry with them their own condemnation: I am

Very respectfully,

(Signed) CHAS. B. COOPER, M.D.

President of the Board of Health.

Executive Chamber Territory of Hawaii.

Honolulu, Oct. 31, 1903.

The Honorable the Secretary of the Interior, Washington, D.C.

Sir:—In relation to the letters of Dr. A. S. Ashmead to President Roosevelt and Hon. W. H. Hunt, Governor of Porto Rico, dated August 26, 1903 referred by your Department to me for consideration of so much of these as relates to the leper settlement in this Territory I have the honor to report as follows:

The matter was referred to the President of the Board of Health, Dr. C. B. Cooper, for investigation and report and on October 6th I received his report, enclosing a copy of the report of J. D. McVeigh, Superintendent of the leper settlement, copies whereof I enclose herein.

From my own knowledge of the geographical situation of the leper settlement on the island of Molokai, and of the administration thereof for many years past, I can say that Dr. Ashmead's assertions are not only grossly incorrect, but are extremely ridiculous, and are not entitled to further consideration.

Very respectfully,

SANDFORD B. DOLE.

[Two enclosures, original papers, returned herewith.]

In the *New York Tribune*, Dec. 8, 1893, appeared the following:

THE HAWAIIAN LEPEERS.

DENIAL OF ABUSES AT THE MOLOKAI SETTLEMENT.

To the Editor of *The Tribune*.

Sir:—In your esteemed paper of October 12, 1903, I noticed a communication from Dr. Ashmead, and in a previous issue another one, in both of which he makes statements in regard to the leper settlement of Molokai, Hawaiian Islands, that I knew to be so distorted I was at once prompted to write to you in regard to the same, having spent nearly all of last winter in the islands, where I studied this question of leprosy with the keenest interest and great thoroughness. I was in touch with the Board of Health and the men who were interested in this subject, and therefore knew that the statements made by Dr. Ashmead could not be true. I, however, thought it best to become certain in regard to it, so under date of October 18 I wrote to the president of the Territorial Board of Health, Dr. Charles B. Cooper, and a copy of his letter to me you will find appended herewith. I enclose also a copy of a letter to Dr. Charles B. Cooper from the superintendent of the leper settlement, together with a letter by Dr. Charles B. Cooper, president of the Board of Health, to the Hon. Sanford, B. Dole, Governor of the Territory of Hawaii, dated October 6, 1903.

W. C. WILE, M.D.

Editor *New England Medical Monthly*.

Danbury, Conn., Nov. 17, 1903.

In the letter of Dr. Cooper to Dr. Wile he wrote in substance:

In this article are some very astounding statements made by Dr. Albert S. Ashmead of New York City regarding the abuses at the leper settlement at Molokai, in which he quotes Drs. David Starr Jordan and Barton W. Evermann as authorities in their report published by the Bureau of Fisheries, Washington, 1902, and which statements, like those of Dr. Ashmead, were disputed by Dr. Guthrie McConnell, pathologist at the Medico-Chirurgical College at Philadelphia.

Recently Dr. McConnell was a visitor to these islands, and as he presented excellent credentials, he was given every opportunity by the Territorial Board of Health to pursue his investigations, and accompanied said Board on their semi-annual trip of investigation to the settlement, and is therefore competent, from personal observation and knowledge, to refute the untrue and astounding statements made by the above named men.

I beg to state that the names of neither Dr. Jordan nor Dr. Evermann, according to the permit book of the Board of Health (permits being absolutely required before landing is allowed at the settlement) are recorded.

The Board of Health is always open to give authentic information, and I have written to Dr. Jordan asking for the source of his erroneous information.

The charges made in Dr. Ashmead's letter concerning the management of the lepers of Porto Rico are even more ridiculous than those made against the Molokai settlement.

I notice also that Dr. Ashmead, in his communication to the editor of *The Tribune*, says: "I beg further to say that this substitution of a fish diet in lieu of meat ration is a wrong to the lepers. Meat and milk are proper food for lepers."

As to the diet of lepers, would say that I believe there is no institution in the world where the patients are as well cared for in a dietary sense. Each patient is allowed twenty-five pounds of paiai a week, which is their chief article of food, eight pounds of fresh meat a week, and from one pint to two quarts of milk each daily. The settlement has a large dairy, at present milking ninety cows. Occasionally fish rations are given out, as per the inclosed statistics in the report of Superintendent McVeigh.

To this was added the letters of Mr. McVeigh to Dr. Cooper, and of Dr. Cooper to Governor Dole, which Dr. Cooper evidently had given out for publication.

Upon the receipt of the letter from Mr. Ryan of the Department of the Interior, and before the publication of the letters of Dr. Cooper and Mr. McVeigh by the *New York Tribune*, I wrote to Dr. David Starr Jordan, President of Leland Stanford University, California, whose report as Chief of the Fish Expedition of Investigation to Hawaii I had quoted from in my letter to President Roosevelt. I told Dr. Jordan that his statistics had been questioned by Dr. Cooper, the President of the Hawaiian Board of Health, and by Mr. McVeigh, Superintendent of the leper settlement at Molokai. I also wrote to Professor L. O. Howard, Chief of the Division of Entomology, U. S. Agricultural Department, Washington, regarding the scientific question raised by Mr. McVeigh in his letter (although he is a non-medical man, and therefore irresponsible), that "in regard to the question of fish being a medium for the transmission of leprosy in consequence of being eaten raw, and citing the carp of Japan, which is always eaten raw, and which feeds on mosquitoes, many of which have sucked the blood and sores of lepers, it might be

well to call attention to the fact that no 'light' or surface fish abound on the windward or leper settlement side of the island of Molokai. This side of said island is a rockbound coast, with a sheer drop of hundreds of fathoms deep, and, with the exception of a small cove (Kalaupapa Landing), no anchorage can be found. It is also a scientifically proven fact that the mosquito will not lay his larvæ in salt ocean water, let alone the fact, as above mentioned, that the leper settlement is on the windward side of the island, and is exposed to a heavy swell, which breaks on the coast throughout the entire year. Consequently no 'still water' can be found by the mosquito in which to lay its eggs."

Here is the reply of Prof. Howard :

Dear Dr. Ashmead :

The malarial mosquitoes have been found in brackish water, and *Culex sollicitans*, *Culex cantator* and *Culex tæniorhynchus* also breed in brackish water, not in the ocean itself, but in salt marshes where, by evaporation, pools become even saltier than the ocean water, and will still maintain mosquito larvæ.

Yours very truly,

L. O. HOWARD.

Mr. McVeigh has overlooked some very important facts which pertain to the question he assumes ability to discuss. And that is the fish ponds of Molokai and the other islands, the ditches in which the Chinese and Japanese have planted their imported gold fish, and the "wet" taro-patches, in which the lepers themselves grow their beloved vegetable, from which "poi" is made. All these places are mosquito breeders. In Molokai there are fifteen of these "still waters," fresh and salt water marshes. The numerous ditches are also fishing places, cultivated actively. There are also the "taro" fields, which must be cultivated, according to the testimony before the Senatorial Investigation Committee, by irrigation, of which the lepers say there is hardly enough. At all events, complaints were made that the cattle of the settlement were often knee-deep in the taro-patch mud during the growing season of the plants. Thus they were mosquito breeders.

Dr. David Starr Jordan has replied to my letter, under date December 11th, as follows :

"Referring to your kind letter of December 5th, permit me to say that all the information published in our report was collected by Mr. John M. Cobb of the Bureau of

Fisheries, who is now in Washington, and whom you might address as to the details. He is an expert statistician, and all the details as to the leper settlement at Molokai were procured by him from the Board of Health of the Territory. The data as to the fisheries also came from this source in part and from other sources. Dr. Cobb did not visit Molokai, and the rest of the Commission have no knowledge of this matter at all except as given in Mr. Cobb's report. We have had some correspondence with Dr. Cooper of the Health Board in regard to the matter, but there would seem to be no particular ground for criticism of the correctness of Mr. Cobb's statements.

(Signed) DAVID S. JORDAN."

Mr. Cobb writes me as follows:

"Department of Commerce and Labor.

Bureau of Fisheries, Washington, D. C.

(Unofficial.)

Washington, D. C., Dec. 17, 1903.

Albert S. Ashmead, M.D., 333 W. 23d St., New York.

Dear Sir:—Your letter of the 16th inst., enclosing clipping from the *New York Tribune* of Dec. 8th has been received and contents carefully noted.

The matter of your statement in regard to fishing at the leper settlements on Molokai had previously been called to my attention through a letter from Dr. Cooper to Dr. Jordan, and a reply was sent officially to Dr. Cooper by the Commissioners of the Bureau of Fisheries.

Before proceeding any further, I wish to correct a misapprehension under which all persons engaged in the controversy seem to be laboring, and that is that Drs. Jordan and Evermann are the authors of the report from which you quote. A glance at the Report of the United States Commissioners of Fish and Fisheries for 1901 will show that I am the author. When advance publication was made of my report it was deemed best to bind the preliminary report of Jordan and Evermann with it, as the latter contained certain information which did not appear in mine.

I cannot agree with the interpretation which you place upon the portion of the report relating to the leper settlement. On page 475 of the report I state as follows: "About the center of the northern side of the island, on a point of land extending a considerable distance out into the ocean are located the two settlements," etc. Near the end of the same paragraph I state: "Should the fishermen wish to sell personally to the people of the settlements, they are permitted to do so. The fishermen are all lepers. This fishing has been included in the tables."

The whole paragraph relates exclusively to the leper settlements, of which there are two. I had not the slightest inten-

tion of conveying the impression that the leper fishermen were permitted to sell fish to the other settlements upon the island, and anyone familiar with the geography of the island of Molokai and the conditions governing the leper settlements, would not fail to perceive the manifest impossibility of such a proceeding. Most of the healthy population of Molokai is on the southern, or leeward, side of the island. So far as means of communication are concerned, these latter settlements are much nearer to Honolulu than to the leper settlements. As I understand it, there is no communication between the leper settlements and the outside world except through the steamer controlled by the Board of Health of the Territory.

My whole information in regard to the settlement was obtained from Mr. C. B. Reynolds, who was then superintendent of the leper settlement. I judge from the clipping you sent that Mr. McVeigh is now superintendent. As I understand him, the lepers carried on the fishery as a private enterprise, and if they had a surplus above what they needed for their own use, the Board of Health would purchase same, and pay them a uniform price of seven cents a pound. Also that there were some people at the leper settlement who were able and willing to support themselves, and from these people the fishermen would be able to secure a better price than that given by the Board, and, of course, would prefer to sell all they could to them.

In your original letter to the *Tribune* you gave some figures purporting to be the catch of the fisheries at the leper settlements. Instead of being such, they are my figures for the whole island (Molokai). The total catch for the whole island (Molokai) in 1900 amounted to 376,255 pounds. Of this, the leper settlements caught and sold, either to the Board of Health or to private individuals (no account was taken of the amount they consumed themselves), 46,280 pounds. At that time there were between 1,000 and 1,400 people in the two settlements. Dividing up this catch among them on the basis of 1,200 inhabitants, it would amount to about $38\frac{1}{2}$ pounds of fish per inhabitant during the whole year; not a very large quantity surely. In the table on page 476 the fish-pond catch was omitted after the report left my hands, which explains the discrepancy between the figures given in the text and the sum of the sub-totals in the table. [I am not so sure of that.—ASHMEAD.]

The fish-pond figures appear in a separate table on pages 431-33. There are no fish-ponds on the northern or windward side of Molokai, as the tremendous surf would pound them to pieces. A glance at the plate facing page 476 will show the location of each fish-pond.

The leper settlements of Kalaupapa and Kalawao are on the

northern side of the island, and can easily be found on the chart.

When I was gathering the data for my report the subject of the lepers fishing was brought to my attention, and on interviewing Mr. Reynolds, he very kindly consented to get me complete data on his next trip to the settlements, which he did, and it is this which I have shown in my report. I, of course, made no personal trip to that part of the island, as there was nothing to be seen there in the fishery line that I could not better see elsewhere on the same island. As the matter was of but slight importance, I naturally did not elaborate upon it in my report, although if I had suspected for a moment that such a controversy would have arisen from my one little paragraph: I would have gone into it in detail, and possibly made myself clearer.

So far as my knowledge extends, the statement of Mr. McVeigh in the clipping from the *Tribune* of Dec. 8th is correct.

As to the effect of a fish diet upon lepers, the breeding of mosquitoes in the fish ponds, and the quantity of milk given by the cows, I do not feel competent to give an opinion, as I am not an expert in such lines.

I would be glad at any time to furnish you with additional information or data which you may desire and which I possess.

Yours very truly,

JOHN N. COBB."

Mr. Cobb cannot so easily avoid responsibility for his own Report on Commercial Fisheries of the Hawaiian Island, published by the U. S. Commissioners of Washington, 1902. I read therein on page 431, in the chapter on Fish Ponds, "The total catch for Oahu is 560,283 pounds valued at \$139,714; Molokai is second with 91,919 pounds, valued at \$22,980. The total catch for all the Islands is 682,464 pounds, valued at \$167,041, of which 485,531 pounds, worth \$119,202 are Amaama (Mullet.)" And on page 476 under the heading of The Fisheries of Molokai, I read, " The Amaama (Mullet) is the principle product of the fisheries, 112,514 pounds valued at \$28,154 being taken. Oio (bone fish) is second with 36,000 pounds, worth \$9,000; The total catch for the whole Island amounted to 376,255 pounds, valued at \$67,599. Amaama and Awa were the only species taken in the fish ponds, by far the greater part being of the former. Gill nets took the principle portion, 83,919 pounds, valued at \$20,980, Seines were also used, their catch being 8,000 pounds of Amaama (Mullet,) worth \$2,000."

On page 475, I read, "The fishermen (of Molokai) are *all* lepers." The Board of Health purchases *all* the fish that are caught etc. It distinctly says "all" in both sentences.

On page 434, under heading Honolulu, I read, "In 1851 the first regular market house for sale of fishery product etc., was erected on the wharf, etc." "This is the principal market in the Islands, etc., and has the largest population tributary to it."

In the table following these statements, I read under heading "Table showing by months, numbers, and species of fish sold at the Honolulu market in 1900." Amaama (Mullet,) January, 121,054; February, 94,119; March, 93,056; April, 117,020; May, 87,756; June, 56,299; July, 74,859; August, 52,282; September, 67,112; October, 56,929; November, 79,627; December, 101,951; or a Total of 1,001,571 of Mullet-fish alone were sold in Honolulu, let alone other places. Now the total catch of all the Islands, of Amaama was 485,531 pounds, of which Molokai contributed 112,514 pounds. On page 439, I read, Amaama, the commonest species sells for an average of 25 cents a pound, or $8\frac{1}{4}$ cents each, (that would make 3 fish equal to a pound, which would mean that practically all the Amaama catch of all the Islands was marketed at Honolulu. and the difference in price from 7 cents a pound at Molokai to 25 cents a pound at Honolulu, would be sufficient incentive to the preference of fishermen for the Honolulu market.

On page 439, I read, owing to the impossibility of keeping the catch in a fresh condition more than 24 to 48 hours, the fishermen try not to take more than can be easily sold, etc. On page 377, I read, "The market house at Wailuku is a small affair with only five stalls, which are run by two Chinese and five natives, and is owned by a private individual. The market house with land is valued at about \$1,500. Most of the fish sold here are brought from Kahului, a few miles away, while some Amaama come from the island of Molokai. It has no government supervision, which it needs. The principal market house at Lahaina is owned by the Government, and is valued at \$6,000, etc. It contains six stalls, etc. These were run in 1900 by one American, four Japanese, and four natives. Two other stalls (private) are operated by four Japanese. In addition in 1900, there were two private additional fish

markets in town, valued at \$650. These contained six stalls, which were run by four Chinese, four Japanese, and four natives. There is no inspector at Lahaina, although one is sorely needed, as the sale of tainted fish, particularly by the Japanese is quite common. Lahaina is the *principal market* for the disposal of the fish taken by the fishermen on Molokai and Lanai."

Wailuku and Lahaina are on Maui (healthy settlements).

The general method of preparing larger fish on account of scarcity of ice to preserve them, is to split open the back, remove the entrails, and lightly salt them, and put them in a container, where they remain over night. The fish are not washed before salting. In the morning the pots are taken out, the salt shaken from them, and they are put in a pan of fresh water, after which they are placed upon rude racks or boards covered with cocoanut leaves, and allowed to remain there while the sun dries them. They are put under cover at night. Thus prepared they will keep for some time.

Opelu, *Amaama*, Akale, and Aku are the species usually preserved in this manner. A considerable quantity of *Amaama* on Kauai during 1901 was dried, and afterwards it was all condemned when it reached the Honolulu market, owing to the careless manner in which it had been prepared.

The fish ponds are principally in the hands of two Chinese firms of Honolulu, who have control of the principal source of supply of the *Amaama* and Awa for a considerable part of the year, and are enabled to keep up the prices for this species.

Thus it will be seen that the *Amaama* of Molokai is sold to the healthy population of Hawaii.

I quote now from the Report of Joint Committee of Hawaiian Senate and House of Representatives on Leper Settlement, dated Kalaupapa, Molokai, March 2nd, 1901.

John Kanani, a leper being called, made the following statement. I own horses, wagons, and brakes, etc., (all the fish is taken to market in carts.) We have had no meat which is fit for any one to eat for the last few years. From 1891 to date I have eaten this meat which is not fit to eat." "Is that the only meat that the Board gives you?" was asked. Ans. "Beef and salt salmon; in 1900 meat and salt salmon, and corned beef from California. The beef I said before is not fit to eat,

is the fresh beef. From the first of the year we have had tinned beef. I have these tins in my house yet. It is not fit to eat. The fresh beef comes in different seasons. The meat keeper when he goes to cut the meat always has trouble, because there is such a jam of people coming together, and the stronger ones always trample the weaker ones. If you want salmon, and ask for salmon, they will not give it to you until all the beef is disposed of. Sometimes the "poi" is good. When I came here first the "poi" used to come from Wailuku. When it came there were worms in the "poi" three inches long. That was in 1890."

The lepers also testified that the road that runs through the settlement to *Waikolu* has been enclosed by a fence, and gates put at both ends. The cattle are brought in and penned in during the night, but they jump out on the "Mauka" side, and destroy and eat up the plants, the cane, and other things planted by us. *Waikolu* is not *Kalawao* or *Kalaupapa*.

Taro planting is conducted at *Waikolu*. The Board of Health takes from the leper (it was testified to), 25 per cent of all the proceeds, according to a regulation made by the Superintendent and Assistant Superintendents.

A leper testified that the valley was utilized to raise taro, he complained that trouble arose by running too much cold water, and not allowing it to remain. The still water warms the ground, and gives maturity to the "taro" plants.

A leper testified that seven pounds of meat was not enough ration if bone was given with it.

Mr. Ray, a leper testified that the only ration he took from the Board of Health was rice, which he fed to the chickens. Nine tenths of the rice he said, was fed to the chickens.

How about the matter of beef, was asked. "Well the beef," he answered "was of very poor quality. It would be enough if it was not so bony. I generally threw it away, or it is not eatable. And the butchering is bad. There have been 98 cattle per month, and they would be put in a pen and never let out until they were all killed, and by the time the last one was gone, it was nothing but bone and black meat, not eatable. You get bone sometimes in splinters and bruised badly by cutting with a wide axe."

"How many cattle are killed a day?"

Ans. : " I think about five or six."

" Then the ninety-eight bullocks brought here would last how long ?"

Ans. : " Forty-five about a month, and ninety would last two months."

" I buy all the things I want from the outside, because I cannot get what I want at the store. Things do not trouble me here except meat, because I have to get meat here, I can get nowhere else."

It was testified that the way the weekly allowances were arranged is: If he wants meat, he takes $7\frac{1}{2}$ pounds, or 5 pounds of salmon. If he takes the salmon, he cannot have the beef. Evidently imported salmon is the fish ration issued by the Board of Health.

John Wilmington, storekeeper, testified as to who fixes the price of store-worn goods, or condemned food stuffs. " I put the price down, and sell it at that price."

" Your object is to see that the store makes expenses?" was asked.

Ans. : " Yes."

" Would you charge 25 cents for 5 cents worth of goods?"

Ans. : " If I knew the price of an article was 5 cents, I will sell it for 5 cents."

" If they offer you less will you accept it?"

Ans. : " I will accept it."

" If they should offer you 1 cent would you accept it?"

Ans. : " Yes."

It was also testified to that leper planters of taro of Waikolu and Wailua, (not Kalaupapa and Kalawao) were giving the Board of Health trouble. These planters go and help themselves to " taro," and use it without considering the share of the Board of Health.

John T. Unea, a leper testified. First: The control of the Settlement must be taken away from the Board of Health for good, and sufficient reasons. The reason is the employees of the Board of Health here are doing things in such a way that they are squeezing our necks. Those of us who took rations in " taro" were *ordered to go to Waikolu*, and get the watery " taro." Men were employed to look after the " bullocks and carts." The one man who looks after the bullock-carts gets \$25 a month.

Pinehaka, a leper, was asked: "Are you living at Kalau-papa?" And answered: "Only when I come to visit; I live in Waipolu. My work is planting taro for the Board of Health."

Waipolu is not Kalapaupa or Kalawao.

Kapiula testified that he was a leper who lived at Kalawao first, but was given a house afterwards at Kawaluna; stayed there and improved the place. "I was drunk, and there were others drunk also, but I was the only one expelled from the place. They kicked me away from the place I had improved, for being drunk."

"Where do you get the liquor, as it is prohibited by the Board of Health?" he was asked.

Ans.: "From friends."

"Is intoxicating liquor sold at the settlement?"

Ans.: "Yes. Sometimes I pay for it, and sometimes I get it for nothing."

Mrs. Feary, wife of the Assistant Superintendent, testified that the leper boys borrowed money to drink "swipes," and they are awful boys for drinking beer.

Mr. Dalton, an American, testified that no government would be successful that gave a dispensary license to sell liquors, bottled and sealed, etc. "It would be," he said, "a pandemonium, a hell on earth. You can put that down in big letters. Anything that gives them liquor brings hell here."

Robert Kawao, sworn, testified: "There are quite a number of people here who have the drinking habit before they come here, and the habit still remains after they get here."

"How much ground is given over to the cultivation of 'awa?" was asked,

Ans.: "Three or four acres. Awa does not make a tendency to fight. Whereas 'swipes' usually raises trouble, often between husband and wife. When a man is drunk with 'awa' he simply wants to sleep."

Mr. Dalton also said: "As to the matter of liquor and the promiscuous making of 'swipes,' that it was terrible. Of course there never has been any whisky or regular liquors here, except the very small quantity some one would bring in his pocket. It has always been the 'swipes. When the 'swipes' are prevalent it is not pleasant for us here."

"What is the percentage outside of the two homes to-day using the 'swipes?'" was asked.

Ans: "For some time there would be hardly anybody making the 'swipes.' It is only when they get sweet potatoes, and sometime they do not have any for a while, then there will be a regular deluge of it. There are parties close by who will have 'swipes' when it can be had. As a general thing they sell it; but our inmates they entice to drink; it is generally given to them. It is considered a good joke to get the inmates of our home drunk. There are 120 to 140 inmates of the home, all boys who have no parents. We have had them as young as five or six years; the youngest now is eight years."

[To be continued]

ADRENALIN IN THE TREATMENT OF THE CARDIAC TOXEMIA OF PNEUMONIA.

The writer, Henry L. Elsner, M.D., of Syracuse, N.Y., (*New York Medical Journal*, Jan. 2nd, 1904), directs attention to the appalling mortality of pneumonia due to the resulting cardiac toxemia. The prime factor in this disease is a toxemia with obstructions in the pulmonary circuit, leading to cardiac asthenia. Marked changes occur in the right half of the heart, with far-reaching degenerative changes in the muscle, heart clots, and vasomotor paralysis.

Three remedies meet the indications presented by the circulatory changes due to paralysis of the vasomotor centers, the dilated condition of the arteries and the weakened heart. These are strychnine, digitalis, and suprarenal extract or Adrenalin, its active principle. Adrenalin acts on the heart and blood vessels favourably; it does not act on the vasomotor center. Hence, it may be used to assist strychnine. When the vasomotor center is exhausted, and blood pressure study proves the inefficiency of strychnine. Adrenalin may still be administered, and in some cases which seem unpromising, when combined with the method of stimulation about to be suggested, we may carry the patient beyond the critical period to a safe recovery. Suprarenal extract or Adrenalin, has seemed to the author to act as a needed food in all infections

where there is danger of myocardial degeneration. He reports a case of pneumonia, in a woman, the mother of five children, in whom it had been impossible to raise a continually lowering blood pressure with strychnine. The systolic blood pressure was almost immediately raised by the repeated administration at short intervals of fifteen minutes of a one to one thousand solution of Adrenalin hypodermatically, and the patient was saved.

SUPPURATING APPENDICITIS OPENING INTO THE BLADDER.

BY DR. ENRIQUE FORTUN, SURGEON OF HOSPITAL NO. 1, HAVANA,
CUBA.

Jaun G., a Spanish merchant, 37 years old, with evident syphilitic antecedents, began to suffer about two months ago acute pains in the right iliac pit, while a tumefaction was observed in that region,

He became an inmate of a clinic of this city, where his case was diagnosed as malignant neoplasm. After remaining about 20 days in said clinic, the patient decided to leave for Spain; in the meantime he stopped at an hotel here. While there he was taken with violent fever and ague, with a temperature of about 41 degrees C., and the first micturition following this attack did show the presence of a great quantity of pus.

Dr. Parra who was attending the patient, did me the honor to ask me to assist him. I called on him the night after the evacuation of pus had occurred.

The first symptom to which my attention was called upon examination was the dimension and hardness of the liver, with swellings, the massiveness of which continued uninterruptedly in connection with the massiveness of the iliac pit, in which region (the right iliac pit) an accentuated muscular resistance was observed, though that region instead of being swollen presented a depression, at the bottom of which the rim of the hepatic gland could be felt by the hand. The temperature was 38 degrees, the pulse beat between 80 and 90, and the general condition of the patient was rather satisfactory.

The diagnosis offered no doubt in our opinion: Suppurating Appendicitis with evacuation into the bladder (the urine which

was shown to us was extremely fetid and mingled, and it did contain a large quantity of pus) and syphilitic cirrhosis of the liver.

We advised the patient to consent to be operated upon, which he did. On the following day an incision of about 7 centimetres was made in the middle of the depression observed in the iliac pit. We rapidly reached a perfectly defined cavity, which contained a little pus mixed with mucosities. We washed out the cavity with Hydrozone and plugged it with iodoform gauze. On the following day, when we dressed the wound, upon careful examination of the cavity, we did not find any connection with the bladder, but we could extract the appendix which was affected by feces.

A complete cure was accomplished in a month, and during that time the liver decreased considerably in volume. Since the third day of the operation antisyphilitic treatment was followed.

The communication between the cavity of the abscess and the bladder healed after 12 days of treatment.—*Revista Medica Cubana*, July, 1903.

PRACTICAL LESSONS FROM AN EXPERIENCE OF MORE THAN ONE HUNDRED CASES OF ECLAMPSIA.*

BY BARTON COOKE HIRST, M.D., PHILADELPHIA, PA.

In the University Maternity we have the records of fifty-four cases of eclampsia. In ten year's service in the Maternity Hospital, in seventeen years service in the Philadelphia Hospital, in private and consulting practise I have seen an equal or greater number. Certain facts stand out from this experience which should be emphasized at present, I think, in view of the prevalence of theories not reconcilable with clinical observation nor with the best treatment of the patient.

There are three phases of the subject on which clinical experience throws a valuable light: etiology, the premonitory signs, the preventive and the curative treatment.

It is not the purpose of this brief communication to enter the maze of theories about the etiology of eclampsia: whether the

*Read before the Philadelphia County Medical Society, Dec. 9, 1903.

disease depends upon an embolism of placental cells; upon cytotoxicity of the syncytium, the consequent production of a toxin, and the failure of the organism to produce an antitoxin; upon deficient work on the part of the liver in the reduction of the products of metabolism, and of excess nitrogenous food to urea; upon hyperactivity of the suprarenals or deficient activity of the thyroid; upon resorption of toxins due to microbic infection, is not yet demonstrated. There is no theory yet advanced which has the same basis of common sense and is in such accord with clinical observation as the long-accepted view that the products of fetal metabolism discharged into the maternal blood and eventually eliminated by the maternal kidneys are the chief predisposing cause of eclampsia, and that insufficient elimination by the maternal kidneys is the chief exciting cause. Dienst, one of the latest investigators¹ of the subject, has come back to this view and says, with scientific circumlocution, what the clinician has been saying for a generation. Anything which throws extra work on the kidneys, as a heavy nitrogenous diet and deficient activity of the skin and bowels: anything which impairs the functional activity of the kidneys, as the congestion of an acute nephritis or pressure upon the ureters, is well known to determine an eclamptic attack. As a rule, eclampsia is a disease only of late pregnancy with a living fetus, and is about ten times more frequent in twin than in single pregnancies, showing the probability, at least, of the fetal origin of the toxins of the disease. It is true that rare exceptions to this general rule are observed. Eclampsia has occurred as early as the second month of gestation and as late as six weeks after delivery. But it is open to question whether these cases were not ordinary uremic convulsions. I have a patient in the Maternity at present who has had convulsions in two successive pregnancies at the third and at the fourth month, but she has advanced nephritis and her convulsions are such as might occur in any nephritic subject, whether she is pregnant or not. No doubt the irritability of the cortical cells in the brain, characteristic of pregnancy, had already developed in the woman and determined the convulsive

1. Herzfeld, from an experience of 81 autopsies on eclamptic subjects unqualifiedly declares that insufficient renal excretion, due to a diseased condition of the epithelium, is the cause of eclampsia. *Centralbl. f. Gyn.*, 1901, No. 40. Bar found the kidneys badly diseased in every one of the cases he examined. *L'Obstetrique*, 1903.

rather than the comatose form of uremia in her. An argument often advanced against the responsibility of the maternal kidneys for eclampsia is the alleged fact that women with nephritis are not liable to eclampsia. One set of German statistics is frequently quoted to the effect that only 5 per cent. of nephritic subjects in pregnancy develop eclampsia. The way in which these statistics are exploited by the supporters of some of the newer theories to account for eclampsia would, it seems to me, lead the inexperienced to believe that disease or impaired functional activity of the kidneys in pregnancy may be regarded with entire indifference. No view could be more incorrect or more harmful to our patients. It is not true that women with nephritis are not disposed to eclampsia. The reasons why a comparatively small percentage of them actually arrive at the convulsive stage of the disease are that abortion, miscarriage and premature death of the fetus is the rule in the nephritis of gravid women: that the signs of toxemia appear so early and are so marked as often to call for the artificial termination of pregnancy: that such patients are subjected to an unusually careful dietetic and other treatment and that a long-continued imperfect elimination has made the organism tolerant to toxins. It has been my experience that pregnant women with nephritis or with a predisposition to nephritis by heredity almost invariably demand active treatment to combat a gestational toxemia, and usually require a premature termination of pregnancy. There is nothing, therefore, in the clinical observation of nephritis in pregnancy to shake our belief in insufficient renal activity as a cause of eclampsia, and we should hold fast to the lesson taught by many a bitter experience that nephritis in pregnancy is one of the gravest complications, demanding constant care and never to be regarded with indifference.

Among the premonitory signs of eclampsia there is nothing comparable in value, to the experienced physician, with albumin in considerable and increasing quantities in the filtered urine. It is true that a certain proportion of cases occur without precedent albuminuria, but their proportion is not nearly so large as one would infer from the report of sporadic cases with which recent medical literature is filled. In all my cases there were only two in which albumin was absent. In one of these the postmortem examination showed a chronic nephritis dat-

ing from an attack of scarlet fever five years before. In a recent report of 322 cases of eclampsia from the *Charité* in Berlin albumin was absent in only six. There is no other symptom of a gestational toxemia and threatened eclampsia so constant and characteristic as this. The urea excretion is valueless in comparison. Pregnant women excrete anywhere from three to over thirty grams a day, but usually less than the normal twenty to twenty-four grams. I have repeatedly seen a very low output without the slightest disturbance of health, and occasionally a rapidly increasing toxemia with an excretion of more than thirty grams. Any one who is ill advised or inexperienced enough to attach much importance to urea elimination as a sign of gestational toxemia or threatened eclampsia will be constantly making blunders in diagnosis and treatment.

Casts, other than hyaline, should of course be looked for, but their quantity cannot be measured; they usually accompany albuminuria, increasing with the increase of albumin and disappearing with its decrease, so that their presence and number do not give the clinician as valuable a guide to the requisite therapeutic measures as the quantity and increase of albumin. It is a clinical rule with few exceptions that albuminuria precedes the other signs of gestational toxemia, that the gravity of the woman's condition can be measured by the steady increase in the amount of albumin in spite of treatment, and that a steady and rapid increase of albumin is the most certain and constant premonitory sign of eclampsia that we possess at present. A disregard of this clinical rule is apt to be disastrous to the patient and detrimental to the physician's reputation; yet the impression created by much of the recent literature on the subject, it seems to me, is that albuminuria is unimportant as a danger signal in pregnancy—a view largely theoretical and speculative that cannot be based on sufficient clinical experience. One factor contributing to this view is the use lately of a delicate and unreliable test for albuminuria. Potassium ferrocyanide gives a reaction with albumin, with albumoses, etc., giving the impression that albuminuria is much more common in pregnancy and less serious than is really the case.

The preventive treatment is based by every one, I think, on the theory of kidney inadequacy, whether the individual authority accepts that theory or not. It consists, as we all know,

of a milk diet, diaphoresis, diuresis and catharsis, with extra precautions against chilling the skin. The use of thyroid extract as proposed by Nicholson is still on trial. I propose to make a study of it in the Maternity.

The curative treatment is too large a subject to be treated *in extenso*. Certain disputed points, however, are open to discussion, and on no division of the whole subject is clinical experience so safe a guide. The most important therapeutic measure on which there is still a difference of opinion is the obstetrical treatment of eclampsia in pregnancy and labor. The views as to the necessity of a rapid evacuation of the uterus are widely divergent. It is easy to understand the feeling which prompts a resort to *accouchement force* in eclampsia. The fetus *in utero* seems to be the cause of the eclampsia; the intra-abdominal pressure of advanced pregnancy is an embarrassment to the kidneys; as demonstrated by Herzfeld, a large proportion of the cases is due to pressure on the ureters; there is a general belief that eclampsia is less dangerous after delivery than before, and there are numerous clinical records of convulsions ceasing with delivery and not recurring. I entered on practice firmly convinced that the rapid evacuation of the uterus was the proper treatment, and I have twice reverted to this view, but increasing experience forces me to the conclusion that it is erroneous. The operative procedures necessary, even with the aid of such an excellent instrument as Bossi's dilator, are often followed by injury and shock which an eclamptic patient cannot well endure. I have seen deaths from this cause that might perhaps have been averted by a more conservative treatment. Moreover, recent statistics show that postpartum eclampsia is very little less dangerous than antepartum or intrapartum convulsions, and that the proportion of cases in which convulsions cease after labor is smaller than is generally supposed. After an extended and repeated trial of both plans, I am better satisfied with the treatment directed solely to the eclampsia without regard to the uterine contents, until such a degree of dilation of the os is secured spontaneously that delivery can easily be secured without violence. In antepartum eclampsia evacuation of the uterus is only indicated if, after the eclampsia is controlled, the patient's urine is persistently albuminous and filled with casts,

or if other symptoms of gestational toxemia continue to a degree that excites anxiety. In such a case it is better, if possible, to induce labor slowly by bougies or the Voorhees bags rather than to resort to a forced delivery. Meanwhile the eliminative treatment by diuresis, catharsis and diaphoresis should be actively employed. It necessarily follows that any one holding these views cannot approve of Cesarean section for eclampsia. There is no treatment of the disease with such a high mortality except the pilocarpine treatment. One has a mortality of over 40, the other of over 60 per cent.

As to the treatment of the convulsions, it is well understood that we must employ two sets of remedies: one to eliminate the poison, the other to quiet nervous irritability and muscular activity. It is generally agreed that normal salt injections, sweats and purgation are the most reliable measures under the first heading. Diuretics during eclampsia are of no use, because the kidneys during the attack are practically non-existent as excretory organs. There is usually anuria or a scanty quality of bloody, albuminous urine, in which, by the way, the percentage of urea is often normal for a pregnant woman. Venesection should be classed among the eliminate measures; but after resorting to it almost routinely at first, I now rarely do so. Among these sedatives, chloral and opium dispute the field. I confess to a prejudice against the latter, because it antagonizes the eliminative treatment and there is, it would seem, danger of fatal poisoning from the large doses required, in view of the inactivity of the kidneys. The experience of my colleague, Dr. Tyson, who saw fatal poisoning in a nephritic subject from a dram of paregoric, is always present in my mind. For the relief of the arterial tension and spasmodic contraction of the arterioles we have always used *veratrum viride*. An experience of twenty years with it confirms the good impression originally conceived. Nicholson's arguments in favor of thyroid extract in five or ten-grain doses for the same purpose are plausible, and I intend to give it a trial; but there are cases in which the ingestion by the mouth of five-grain tablets would be difficult or impossible.

Finally, I would urge the advantages of treating eclampsia in a well appointed hospital. Nothing is more disheartening than the inadequacy of this treatment observed, in consulting

practice in private houses. If cases of eclampsia were transported in an ambulance without delay to a hospital well appointed for their treatment and with a staff thoroughly drilled in the management of such cases, the mortality could be kept at or under 13 per cent., which is less than half what it is in private practice. In other words, a patient would have more than double the chance of recovery that she has in her own home.

THE ROLE OF INTRACELLULAR CATALYTIC PROCESSES IN THE PATHOGENESIS OF MALIGNANT NEOPLASMS.*

BY JOHN C. HEMMETER, M.D., PH.D., OF BALTIMORE. MD.

In the paper presented I have endeavored to consider the pathogenesis of carcinoma from the standpoint of the chemist and physiologist rather than from the bacteriological standpoint. The principal hypotheses were referred to and the difficulties in the way of the acceptance of the parasitic theory briefly given. The changes which cells may undergo under normal and abnormal conditions were presented in the paragraph on "metaplasia" In order to narrow down the point of inquiry the investigations were made upon one type of carcinoma only, that with which the author has greatest familiarity, the adeno-carcinoma of the stomach. A résumé of recent experiments on tumor transplantation preceded the writer's personal experiments, the main conclusion of which was, that gastric ulcers can be experimentally produced, and that the edges of these gastric ulcers can be brought to undergo adenomatous transformation by the injection of a cell-free and sterile fluid obtained from a carcinoma of the same organ from the same species of animal. It is not asserted that these adenomatous developments are genuine carcinomata, but they closely resemble the histological structure of adeno-carcinoma.

Inasmuch as this filtrate was destroyed after being heated to 60° C., it was concluded that the agent active in causing this abnormal proliferation at the edges of experimental gastric

*Abstract of the paper read before the Philadelphia County Medical Society, March 11, 1908.

ulcers was a catalytic agent. It might be objected here that the successful experiments were too small in number to permit of reliable conclusions. On this point, I wish to state that the experiments extended through years, and at times had to be given up entirely for five to six months for lack of material, because I believed that I could only work with carcinoma material developed spontaneously in animals. The main reason for this is to be sought in the fact that the experimental adenomata are very small, in three out of four cases their recognition depended upon microscopical examination. Although I was and still am in communication with the principal veterinary schools in this country, and even with Professor Ostertag and Professor Regenbogen of the "Tierärztliche Hochschule" of Berlin, I have come into the possession of only one dog with carcinoma of the stomach. The investigations would have been indefinitely delayed had I depended exclusively upon this material. At present I am still engaged with these experiments, and by the aid of Professor Frank Martin and Dr. J. Mason Hundley, from whose aseptic technique I hope to secure a larger number of recoveries from the operations described, I hope to be able to report an additional number of successful experiments in the near future.

The fact that in one instance carcinomatous degeneration developed at the edges of a pre-existing gastric ulcer spontaneously gives promise of a new source from which to derive canine carcinoma material. At the same time this spontaneous development of carcinoma may be interpreted as a criticism of my deductions. It may be argued that the injection of the sterile and cell-free carcinoma extract does not prove that an enzymatic agent is necessary to start already proliferating cells into a condition of malignancy (assuming for the present that the experimental adenomata were malignant in type). Upon closer consideration, however, this criticism can hardly be considered as invalidating the main deductions, for throughout our considerations I have not argued that something entirely extraneous to the cell is needed to cause a typical proliferation, but, on the contrary, I have tried to emphasize that the agent is something which the cell contains or produces within itself, but that its regulatory mechanism is destroyed.

The adherents of the parasitic theory might argue that the

carcinoma extract, though sterile, might contain the products of bacterial metabolism, toxins, etc., which are soluble and can pass through a Pasteur filter, and that it was these toxins that acted as the agency causing the abnormal growth. This objection it is impossible to meet. It might be urged, however, as far as we can judge from the infectious diseases, that bacterial toxins may, after injection, cause the clinical picture of the disease, but not the characteristic histological alterations in the cells of the tissue which are concomitant with an infection by the living bacteria. Injections of tuberculin, for instance, cannot cause tubercles. A possible objection is also found in the fact that adenomata of the digestive canal have been caused by mechanical injuries; for instance, by cutting off the lower ends of the glands of Brunner and of Lieberkühn. This observation has not as yet been satisfactorily been investigated, and it has not been claimed that adenomata caused in this way were malignant. Lubarsch (*zur Lehre v. d. Geschwulsten*, p. 253), succeeded in producing a fibroadenoma in the liver by transplanting a portion of liver into an artificial lesion made in another region of this organ. He does not maintain, however, that this was a malignant, or as he prefers to designate it, an "autonomous" neoplasm, and presumes that his experimental neoplasm would have eventually given way to a connective tissue cicatrix.

In the preceeding it has been pointed out that the autonomous development of neoplasms (adenomata) may be due to subtle damage to cytoplasm, which is, in fact, another way of expressing the traumatic and irritation etiology of neoplasms. I do not wish to dispute such possibilities. On the contrary, they are to a large extent necessary for the bringing about of deranged catalytic action already described. It is important to emphasize in this connection that I have not succeeded in producing an adenocarcinoma by cutting or bruising the gastric glands, not even when they were in the environment of a pre-existing lesion.

The studies concerning the effect of osmotic pressure upon normal and carcinoma cells suggest the influence of physical energies upon normal as well as abnormal cell growth, and that future investigations along this line, even, promise to throw light upon this problem.

The immediate and specific causes of cell division are next considered. The theories of Virchow, Thiersch, Boll, and Weigert are abstracted, and the conclusion reached that the stimulus to normal cell growth is of a chemical nature.

The influence of physical laws upon cell growth constitutes another paragraph, which is followed by a consideration of the question of how the cell builds up protoplasm, that is, the methods and means, by which it carries on the synthesis of its own substance. It is here suggested that this is effected by means of intracellular catalyzers.

The conception of how the cell protoplasm must be constructed, its possible chemical organization, concludes with a support of the view accepting the foam structure of protoplasm, and of a special catalyzer regulating the synthetical construction of protoplasm.

As the cell is conceived to be made up of innumerable ultra-microscopical compartments, the more subtle and partial damage of cytoplasm and nucleus in disordering the orderly and normal performances of intracellular catalysis, are next set forth.

The reversibility of the enzymes is then briefly considered, and the possibility of damage to the ferment which controls the upbuilding of protoplasm is suggested, and also that there cannot be ubiquitous chemical equivalence of protoplasm.

In the final paragraph on metastases, the suggestion is thrown out that possibly the blood serum contains defensive substances effective in the destruction of carcinoma cells, and a study of this means of defence gives hope of a more successful form of treatment.

Suture of the Heart.—Another case of suture of the heart has been going the round of the Press. The patient was a man who had been stabbed, the knife having passed through the pericardium and wounded the ventricle. He was admitted to the London Hospital, where the external wound was enlarged and the wounds in the heart and pericardium sutured, and so far the patient is reported to be doing well. These cases are very rare, only three or four having so far been placed on record.—*Med. Press & Cir.*

SOCIETY PROCEEDINGS.

CLINICAL SOCIETY OF THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

Meeting held October 5, 1903.

The President, Dr. James Hawley Burtenshaw, in the Chair.

AMPUTATION OF BREAST, DEMONSTRATING TRIANGULAR DRESSING OF ARM.

Dr. J. A. Bodine presented three cases of amputation of the breast for carcinoma, in which the arm had been dressed during the healing period on a triangle holding the upper arm at right angles to the body. He called attention to the consequent freedom with which the patients could use their arms. He had been using this dressing in all such cases for the past three years. An isosceles triangle made of light splint-wood, held in position by rubber adhesive strips, is so placed against the side of the chest that the upper arm is at right angles to the body, while the forearm in supination rests along one side of the triangle with the hand resting upon the hip. The triangle presses along the body between the line of incision for removal of the breast and the posterior puncture made for the drainage-tube. The arm being in this position the patient is perfectly comfortable while in bed, and also while walking about. Adherence of the skin flap and scar to the under surface of the arm after enucleation of the axillary contents is an inch and a half to two inches nearer the shoulder end of the arm when dressed in this position than it is when bound against the chest. It is this difference in position of attachment of the scar and skin flap to the arm, that gives such freedom from cicatricial contraction following amputation of the breast.

Dr. R. H. M. Dawbarn said that he had employed the method demonstrated by Dr. Bodine several times. It is more comfortable because the abduction of the arm slides the scar so that it does not adhere to the region of the vein nor the main lymphatics. Patients at times have been made very miserable after amputation of the breast by swelling of the arm, due to adhesion of the scar, the forearm and arm becoming large and edematous, and annoying the patient for a long time. He avoids it, partly by carrying the incision up the middle or even posterior part of the axilla, although the main dissection is

sharply forward in the anterior portion of the axilla where the main vessels lie.

There is only one muscle which can take the place of the pectoralis major and minor, both of which must be entirely removed in the modern operation, and that is the deltoid. It is wonderful how this muscle hypertrophies, and being inserted into the outer third of the collar-bone, with a very poor leverage, how it accomplishes its mission. In the case of women who have very weak deltoids (the reverse of those shown by Dr. Bodine), it has been part of his regular operation of late years to dissect free from the clavicle one inch of the anterior edge of the deltoid, and to carry it inward as far as it will easily go, and then to sew it to the stump of the pectoralis major. That muscle, in course of time becomes hypertrophied, and it helps a great deal; but in cases in which this operation is performed, it obviously would not do to use the isosceles triangle, with its necessary abduction of the arm. In the technique just described, as to the deltoid, the cephalic vein is liable to cause trouble, and he generally ties it off, but this may not be necessary if great care is taken. It is only when the axillary vein is involved in the cancerous growth that saving the little cephalic vein becomes a matter of importance.

EXTIRPATION OF THE JAW.

Dr. Bodine also presented two cases of face surgery to illustrate two practical points which he considers important in the treatment of these cases. Control of hemorrhage in all surgery above the level of the cricoid cartilage, is accomplished by rapidly making an incision down to the carotid artery supplying the area to be invaded, passing an ordinary rubber band that has been boiled, around the vessel, and having it pulled taut by an assistant, thus as effectually controlling the blood-current as in the case of an Esmarch bandage around a limb. The rubber is withdrawn after the operation is completed, without having done any damage to the walls of the blood-vessel. He had followed this plan many years in excisions of the tongue or jaw, and in other bloody work about the head or face. The second point that the doctor wished to emphasize was that wounds of the face made by the surgeon should never be dressed with gauze. If no dressing whatever is applied, and the wound is exposed to the atmosphere, it heals per primam. Dressings

applied to the wound usually become saturated either with tear or with saliva, thus certainly infecting the line of incision.

One patient presented to the Society had carcinoma of the superior maxilla. A wide removal was practised, the hemorrhage being controlled as stated above. He did not lose more than a teaspoonful of blood during the operation, suffered no shock whatever, and on the third day after operation was permitted to walk about the ward.

The second case was one of removal of the left-half of the upper lip, the gap being filled in by a plastic manœuvre. The wound had healed per primam, no dressing having been applied.

FRACTURE OF THE PATELLA.

Dr. Bodine showed a case of fracture of the patella in which primary suture of the capsule had been practised. He said that in fracture of this bone, the open operation of suture of the capsule is always to be preferred to treatment by splints. It is impossible to obtain bony union with perfect joint function in any other way than by open incision. The fringe of the fibroperiosteal capsule invariably drops between the broken margins of the patella, effectually preventing bony union. In addition, a blood-clot forms, which becomes organized and fixed. The only objection one can bring against the open operation is the possibility of sepsis. This can be avoided with almost absolute certainty, as illustrated by the patient shown, who was operated on without the fingers of the operator going near the wound, only four instruments being used. The entire operation can be performed in fifteen minutes, without any pain whatever, and with the use of one-fourth of a grain of cocaine. After incising the skin the blood-clot is washed away by a stream of warm salt solution, the ruptured capsule is picked up and saturated with kangaroo tendon, and the skin incision closed by a subcuticular suture. A posterior splint is then applied and the patient returned to bed. It is not always necessary to enter the general articular cavity of the joint. The posterior reflection of the general synovial membrane is sometimes so high up on the posterior surface of the patella, that the line of fracture is below it, and the general articular cavity escapes. The patient had been operated on four weeks previous to the meeting, and was able to flex his knee-joint nearly to its full limit. In two weeks more it was to be expected that the motion of the joint would be perfect.

Dr. Dawbarn opened the discussion of Dr. Bodine's cases by saying, in regard to extirpation of the jaw, that he differed from Dr. Bodine as to the wisdom of never dressing a face wound, as he thought that an occasional stitch abscess, due to exposure to dust, might be prevented by the use, for instance, of sterile gold-beater's skin courtplaster, one of the best of dressings. Lately he had modified the Ferguson incision in these cases, carrying it distinctly below the orbital plate, as, if carried into or closely below the lid, a certain degree of ectropion will result. The lower the scar, the safer the operation in this respect. He believed in a preliminary operation for control of the external carotid in every severe operation about the face, such as excision of the jaw, and was convinced that many deaths from shock would not occur if this procedure were carried out.

Regarding the fracture of the patella, he said that if it were his own patella, he would not submit to primary suture, but would have it treated by splints. He thought a close fibrous union as satisfactory for practical purposes as bony union, and the element of risk much less, for some slight risk exists, even at the hands of the most rigid aseptician. He differed with Dr. Bodine in regard to the falling downward of the capsule between the bones being the chief cause of non-union. He thought the main obstacle was a bulging forward of the loose synovial membrane between the two fragments. The bones could not unite, of course, through this membrane.

The Chairman, Dr. Burtenshaw, said that he well remembered the first case of fractured patella that came under his care. He brought the two pieces of bone together by means of adhesive plaster applied to the anterior aspect of the leg and thigh, bound the limb to a splint, and kept the patient in bed for the better part of three months. The result was perfectly satisfactory. He thought the danger of infection of the knee-joint by the open method very pronounced, but no greater, in the hands of a competent surgeon than in many other wounds.

Dr. W. H. Luckett said he did not think it best to omit the application of dressings to face wounds. He is in the habit of applying a wet dressing to all primary wounds of this character, not so much for its antiseptic effect as for its mechanical

action in preventing too early sealing of the edges, with consequent accumulation of serum and blood in small pockets, which are favorable points for the growth of bacteria.

With regard to quadriceps muscle, he thought it helped to keep pieces of fractured patella apart, as well as certain tissues both in front of and behind the bone. He had never seen a synovial membrane come between the fragments from behind: in fact, the normal position of the membrane would prohibit this action. An absolutely bloodless field is necessary for a successful outcome of the operation, as one reason for adoption of the open method is to remove the fluid and blood from the sac and from between the two pieces of bone.

Dr. Alexander Lyle said that he had operated by this method in three cases, and with excellent results in two. In the third, ankylosis of the joint complicated recovery, but this was corrected under general anesthesia.

Dr. Victor Pedersen said that it is a well established fact that there is no synovial membrane behind the patella in the human being. It stops at the margin of the patella, and behind it extends only as a modified membrane. Probably the structure which would interfere most frequently with union of the fragments would be the capsule.

Dr. Bodine closed the discussion by saying that the suggestion of interference with union by the general synovial membrane was entirely new to him, and from his knowledge of the anatomy involved, he did not see how it was possible. He did not think it wise to irrigate the general articular cavity of the joint at time of operation. The irrigation fluid would produce more damage than a moderate amount of blood effusion. It is only necessary to wash out the blood-clot from between the two broken pieces and to suture the capsule. Operations should not be undertaken before the third day following accident, during which time all oozing of blood from the broken surfaces has stopped, and the application of the tourniquet is unnecessary, in fact it is in the way.

ENCEPHLOCELE

Dr. Lyle presented a child, born April 14, 1903, of healthy parents, which at birth had a tumor measuring one inch in diameter by one-half inch in depth above the nose and between the eyes. Through the courtesy of Dr. Whit he was asked to

see the child, and he advised immediate operation. On April 17th, three days after birth, the baby was placed under chloroform narcosis and a longitudinal incision was made over the tumor and the frontal bone. The flaps were retracted, the sac dissected free and the contents easily withdrawn. Two small horns of the sac extended down into the nares. After the dissection was completed, it was found that the absence of bone corresponded in size and shape exactly to that of a silver quarter of a dollar. To cover this opening and to prevent a recurrence of the protrusion a corresponding amount of periosteum was raised from the frontal bone, turned on its pedicle and united with catgut to the margin of the ring. The skin was likewise sutured, a firm compress of gauze applied, and the head bandaged. The result was fairly gratifying, and after a month a truss with double water-pads shaped like the finger tips was made and worn constantly. The present condition of the child is satisfactory. The periosteal flap is becoming more rigid and the bone is filling in, while the child's general mental condition is excellent.

APPENDICITIS WITH COMPLICATIONS.

Dr. L. J. Ladinski showed a girl, 18 years old, on whom he had operated for appendicitis. He said that when he first saw the patient, it was impossible to make a diagnosis. A second examination a few days later revealed the presence of a large fluctuating tumor in the pelvis posterior and adherent to the uterus, but nothing abnormal was found in the ilias fossa. An incision was made in the median line. The tumor was found to consist of a mass of hypertrophied omentum to which a coil of intestine and the inflamed appendix were intimately adherent. In the centre of the mass was a large collection of pus. The tip of the appendix and the coil of the intestine were adherent to the walls of the posterior cul-de-sac, and because of the gangrenous condition of this portion of the gut, about six inches of it were incised and a Murphy button inserted. The appendix was removed and the adherent omentum excised, and the pelvis and abdominal cavity drained from above. The patient made a good recovery after a protracted convalescence. Four weeks after the operation she developed a mastoiditis on the right side and the bone was incised and scraped.

He also presented a patient with a large anterior labial hernia. He said that there are two varieties of labial hernia, the anterior, which is similar to the scrotal hernia in the male, and the posterior in which the hernia descends either in front of or behind the uterus into the vagina and labia. Labial hernia must be differentiated from fibromata, sarcomata, or cysts of the labia.

IMMUNITY.

The paper of the evening was read by Dr. F. M. Jeffries. It was a fifteen minute *resume* of the investigations culminating in our present ideas of immunity. The paper opened with definitions of immunity and infection and then described and classified the varieties of immunity.

After classifying the means by which immunity may be acquired, the speaker proceeded to a discussion of the production of toxins and antitoxins, and the statement was made that when the problem of the production of antitoxin is solved the problem of immunity will also have been solved. The subjects of hemolysis and bacteriolysis were briefly gone over, and then the two chief theories of immunity were explained, *viz.*, Metchnikoff's theory of phagocytosis and Ehrlich's side-chain theory. It was stated that neither of these theories explains all the phenomena of the subject, although they have each added materially to our proper understanding of the same. Other conditions than those explained in these two theories must be taken into consideration.

The paper closed as follows: "To sum up, the processes of immunity are exceedingly complex, and there is no theory yet advanced which satisfactorily meets the requirements of a thorough explanation. The end is only attained by the activities of all parts of the body, the cells as well as the fluids. Nor must we lose sight of the fact that the bacteria themselves are subject to variation, as an example of which may be cited the colon bacillus, the normal habitat of which the intestinal tract, and which probably has to do with the processes of digestion, yet let the proper conditions be supplied and it gives forth its poison, that is to say, becomes pathogenic; and finally, we know that many of perhaps all bacteria produce in their growth enzymes which are bacteriolytic in themselves." A number of articles in English dealing with the subject were cited.

Dr. Albert Kohn opens the discussion of Dr. Jeffries' paper. He said Metschnikoff studied the white cells. The origin of the work shows how laborious it must have been, and it is wonderful how his theory of phagocytosis was gained on a theoretical basis, working on the lower organism. He studied the exoderm, the endoderm and the mesoderm; the workings of this layer were to a certain extent of the same nature as those of the endoderm, that is, of a digestive type. He then began to prove his conclusions on marine animals, inserting foreign bodies in order to see what the action would be. He found that irritation was caused by what seemed to be attempts at digestion. Later, he modified his primary conclusions that the phagocytes were the only bodies concerned in the digestion of the bacteria and their toxins. His theory was accepted until Bouchard brought forward the theory that it is not the phagocytes that digest the live bacteria; that after their destruction they carried away their dead bodies.

As to the question of susceptibility, according to Ehrlich, all consideration of such outside factors as hygiene, traumatism, etc., must be omitted. If we have receptors which in the one set of cells will unite with certain parts of the toxins, the haptophorus atoms, these receptors already exist, and they cannot be influenced by traumatism, hygiene, etc., unless the receptors are changed, decreased or increased by those outside factors. The fact that the alexin bodies can be destroyed by heat, a fresh supply of sear added, and the properties of the alexin bodies return proves that the heat destroys the alexin.

Dr. James J. Walsh said that the subject of immunity was usually considered very complex. In reality, however, it is not more involved or inexplicable than is the simple matter of solutions. We pour sugar into water until it will not receive any more, but the same water will then take up a large amount of salt, and after it has become saturated with salt it will take up various other substances. A child suffers from scarlet fever, and will not take the disease any more, but will if exposed, take mumps or measles. It is as if the cells become saturated with the toxins of one disease after another. The first step in immunity, as regards our modern knowledge of the subject, was taken by Pasteur when he demonstrated that chickens at the normal temperature would not contract anthrax, though if

their temperatures were reduced to that of the animal in man, they were liable to anthrax. The six or eight degrees of higher temperature produced a natural immunity to the disease. In the light of Ehrlich's theory of immunity depending on the number of side chains or cells, one is tempted to wonder whether more side chains exist at the higher than at the lower temperature, and whether a chicken's immunity could be destroyed by a series of changes of temperature. As a matter of fact, Ehrlich's and Metschnikoff's theories are not so far apart as has often been thought. The protective substances in the blood and cells, according to Ehrlich's theory may well be supplied by the activity of the phagocytes.

The first immunizing process ever invented was Jenner's vaccination. During the past week Dr. Walsh said that he had been with Dr. Calkins of Columbia University, who has been working on the protozoon supposed to cause smallpox. This protozoon occurs also in vaccinia. In the case of vaccination however, the parasites invade only the cell bodies, while in smallpox they invade the nuclei of the cells, grow much more luxuriantly, and after a time invade the whole body, thus producing a generalized septic condition. In recent years we have come to realize as the result of studies in immunity, that babies who are fed on mother's milk are better protected against contagious diseases than are those artificially fed. The principle reason for this is that most mothers have had the ordinary diseases of childhood and enjoy immunity from them. Immunizing substances occur in their milk and are transferred to the child during the nursing. This constitutes another reason why mothers should be encouraged to nurse their offspring and not allowed to neglect this sacred duty, unless there is some absolutely necessary reason.

The American Electro-Therapeutic Association will hold its fourteenth annual convention at St. Louis, Sept. 13, 14, 15, and 16, 1904. The scientific sessions will be held only in the mornings, whereby the members will be afforded an opportunity of visiting the various attractions of the exposition during the afternoon.

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EDITORIAL.

THAT LIVER.

There is no doubt that the liver performs one of the most important functions in the human organism. Nor can there be any question that it is, pathologically, as important and possesses an amount of interest of no mean order. But it is not of its physiologic or pathologic points of interest that we intend to speak, but rather of its sociologic and economic aspects. We daily meet with individuals who are affected with a mild degree of hypochondriasis, and they attribute all their real and imaginary ills to the liver. A syphilographer of eminence taught his pupils that when they had cases with obscure symptoms, so clouded that no reasonable cause could be found for them, it was safe practice to treat the subjects for syphilis—and his advice was correct. Following the same train of thought, there seems to be a certain amount of predilection now-a-days to treat the majority of patients for disturbed livers, and they in turn learn to attribute their ailments to that liver.

This viscus has been made the universal scapegoat, and, right or wrong, it must be harassed by both its possessor and by the medical practitioner. In fact, that liver is the target at which everyone hurls his missiles, and we somewhat wonder if it is not finally destined to completely disappear, and give future generations of livers a rest. As matters now are, that liver does not seem to have the ghost of a chance to enjoy its well-earned innocuous desuetude, and there seems to exist no rational basis upon which to found such a hope. The influence of this forced activity from a sociologic point of view is of the most important. Its effect upon the arts is daily seen in its manifestations. We have presented to us in music, impossible themes, written in frightful time, and accentuated by cords of a tone and color of the most lurid character. In painting, we are presented with monochromes of the most intricate character, which only one versed in such things can interpret, and in literature we are treated to reading matter which not even the author can explain or render lucid. Some will ask what the cause of such strange things can be. It is simply that liver. It makes all its victims see everything of a gamboge tint, and decorative art assumes a "greenery yallery" color.

From an economic point of view the liver has played a most important part. It has been the means whereby fortunes have been made by many individuals. They have recognized, and fully appreciated the complaints made by querulous humanity, which attributed all its ills to that liver, and the demand thus indirectly and darkly hinted at has been promptly met with the desired supply. Forthwith appeared Dr. Skinkum's Liver Regulator, warranted to cure anything in the liver line, and all the real and imaginary ills depending upon a liver whose main-spring has been sprung. This harping upon the liver is one of the long suits of the patent medicine man. He is very successful in his appeals to the common herd; his illustrations of before and after taking are both striking and weird, and the former strikes terror to the heart of the intended victim. The reading matter does credit to the imagination of its writer, and shows his intimate knowledge of the foibles and follies of ordinary mankind. In fact, as an artistic piece of literary construction it could serve as a model. At every turn we have horripilating descriptions of the evils which are wrought by that

liver. Those who never knew that they possessed such an organ, immediately experience all the symptoms caused by an impaired hepatic organ. Forthwith they become steady customers and purchasers of liver regulators, liver pills, and of the entire series of hepatic disturbers, which are concocted and marked by the patent medicine manufacturer. However, there is money in it, and that is all the inducement that this conscienceless gentry needs to palm off trash upon a credulous public.

Matters have come to such a pass, that an honest physician who diagnosis a liver trouble is laughed at, scoffed, and jeered, and he has that liver thrown back at his face. The swing of the pendulum has gone to the opposite extreme in many cases, but the majority still hang on to the liver trouble with a little variation now and then directed to the appendix. People still inquire of physicians in regard to the side on which that liver is located, and it is destined to hold sway over the public mind for many years to come.

Menstrual Epilepsy Treated by Ovarian Transplantation.—

M. Brennan reports the case of a girl of nineteen years, who for three years had attacks of epilepsy at or near her menstrual periods. No lesion of any kind was discovered. No form of medical treatment succeeded in overcoming the difficulty. It was finally decided to operate; the uterus was found to be normal, the ovaries, also, with the exception that they were somewhat cystic. The ovaries were removed, and a portion of one of them, as large as a bean, deposited in a cavity prepared to receive it on the fundus uteri, and uterine tissue brought together around it. The patient made a good recovery, has menstruated but once, eight weeks after the operation, and has had only a few very slight nervous attacks, and these only following special overexertion. The improvement is so great that there is every reason to hope for a complete cure.—*Med. Record*.

BOOK REVIEWS.

THE MEDICAL EPITOME SERIES.

Organic and Physiologic Chemistry. A Manual for Students and Practitioners, By ALEXIUS MCGLANNAN, M.D. Series edited by V. C. PEDERSEN, A.M., M.D. 12mo. pp. 246. Illustrated with Nine Engravings. [Philadelphia and New York: Lea Brothers & Co. 1903. Price, \$1.00.

The present number of Lea's Epitome Series is a most excellent one, and particularly valuable to medical students and practitioners, in view of the fact that it is devoted to organic and physiologic chemistry, two branches which are but too much neglected by the medical profession in general. The author deserves much credit for the very clear and easily understood manner in which he has written the book, and he is to be further commended upon the fact that he has thoroughly covered his subject. These qualities should certainly recommend his little manual, not only to those for whom it is intended, but to teachers as well. We have been very favorably impressed by it, and we have no doubt that others will have the same opinion directly they make a careful examination of its contents. The author is thoroughly conversant with his subject, and we are sure that a careful study of the pages of this epitome will give a good working knowledge of the subjects with which it deals.

The Practitioner's Guide to the Diagnosis and Treatment of Diseases of Women. By DR. GUSTAVUS M. BLECH. 8vo. pp. 112. Illustrated. [Chicago: M. Robertson & Co. 1903.

This first attempt of the author to write a book is very creditable indeed. Of course it is not a treatise, nor is any attempt made to cover the entire subject as is done in the larger and more ambitious works. The author has merely endeavored to give instruction on those points in which most practitioners fail, and he has certainly most successfully done this. We do not propose to offer any criticisms beyond the one that the book should have been made larger, and it would have been better to add a number of illustrations of conditions to which allusions are made. The style is short and positive, all discursive writing having been avoided and discussions omitted. These are two points which will be much appreciated by the reader. We are anxious to see the author's work on sterility, whose future appearance he foreshadows.

Transactions of the National Association of United States Pension Examining Surgeons. Second Annual Meeting, Washington, D.C., May 13th & 14th, 1903. Including an

Account of First Meeting, at Saratoga Springs, June 9th, 1902. Vol. I. 8vo. pp. 215. [Published by the Association, 1903.

We have been much pleased to receive these Transactions, as they furnish us with evidence of the interest that Pension Examiners are taking in their work of seeing that no unworthy case is permitted to draw a pension from the Government. In the volume before us are given some very well written as well as considered papers by very capable members of this Association. The great interest taken in it is evidenced by the fact that the attendance has grown, and it promises to become still greater at the next meeting, which will be the third, and will be held at such time and place as the Secretary may designate in his next call. There being no mention of this in this volume of Transactions, there is no doubt that such notice will be forthcoming in the near future.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

The Practitioner's Guide to the Diagnosis and Treatment of Diseases of Women. By Dr. Gustavus M. Blech. 8vo. pp. 112. Illustrated. [Chicago: M. Robertson & Co. 1903.

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THE MEDICAL EPITOME SERIES.

Organic and Physiologic Chemistry. A manual for Students and Practitioners. By Alexius McGlannan, M.D. Series edited by V. C. Pedersen, A.M., M.D. 12mo. pp. 246. Illustrated with nine engravings. [Philadelphia and New York: Lea Brothers & Co. 1903. Price \$1.00

The Polyclinic, published in London, is the Journal of the Medical Graduates College, London, and begins its eighth volume with the January issue. It still remains monthly, but has changed its form from an octavo to a small quarto. The January issue contains but fourteen pages, but will no doubt soon increase in size to one more nearly approaching to that it formerly had.

The Albany Medical Annals has made its January issue of the current year a jubilee number in honor of its twenty-fifth year of publication. It has been made what the Germans denominate a *Fest Schrift*, and it contains 208 pages full of especially prepared articles by members of the faculty of the Albany Medical College, whose Alumni Association issues the *Annals*. We desire to congratulate not only the editor, but all the gentlemen who took part in the issue of this truly royal number.

The Criterion has appeared with its January issue more interesting than ever. It is replete with good reading matter, and those who have become accustomed to this sterling publication look to the receipt of each succeeding issue with more than ordinary expectancy. In the January number we are given, among other things, another of his characteristic Kentucky stories by John Uhri Lloyd, who has made for himself a reputation second to none, as a delineator of a certain phase of Southern life. The *Criterion* continues to be published at \$1.00 a year, with its office at 156 Fifth St., New York City.

The Daily Medical we are informed by the publishers, will appear Feb. 1, and continue to do so every day with the exception of Sunday. It will vary in size from four to eight pages daily. It will be issued in New York City, and its publishers have great hopes of making it a permanent success. We have made arrangements whereby our paid up subscribers can have the *Daily Medical* for a year at the subscription price of \$1.00 in advance, if sent to us. Those not already subscribers to the JOURNAL may obtain it and the *Daily Medical* by sending us \$2.00 for a year's subscription to both.

The Medical Brief has issued a handsome Souvenir to its friends and contributors in the shape of an octavo, containing well executed half-tones of its contributors during the year 1903. The first portrait given is that of Dr. J. J. Lawrence, the proprietor of the *Brief*. Facing each portrait is a photo-engraving of the beginning of that author's contributions, taken direct from the pages of that journal. The idea is a new one, and this memento will be kept by all those who receive one, as it is gotten up in handsome style with an embossed cover, the lettering being in gold with white flowers on a brown background.

The Journal of Cutaneous Diseases, including Syphilis, has been without doubt, phenomenally successful during the past year in maintaining the high standards which the new management have set for it. The last issue, for January 1904, shows us that not only has this been continued, but additional improvements have been made. The *Journal* is larger to-day than

it ever was, and contains articles in every way of a superior order. No progressive physician can afford to have his name not appear upon its subscription list. It is a publication of high standing, and among its distinctive features are the transactions of the Dermatological Societies in New York, Chicago, and Boston, and also of the annual meeting of the American Dermatological Association. The subscription price is now \$4.00 a year, which is very cheap, when the size of the *Journal* is taken into consideration. We certainly are not acquainted with a journal devoted to cutaneous medicine and surgery, and to syphilis, which is its superior.

MELANGE.

In Memoriam, William Matthew Warren.—In loving memory of a beautiful and beneficent life, we, the assembled directors, executives and employees of Parke, Davis & Company, would fain express the sorrow and heartache caused by the untimely death of our General Manager, William M. Warren. For the relief of our own grief, as a just tribute to a life rich in effective performance, and in deference to the sentiments of a wide circle of surviving friends, we record this testimony to the noble character, the massive and solid integrity, the large, warm, generous heart, the brilliant and gifted mind, the abounding energy of our beloved friend. As long as life and memory may linger in our mortal frames we shall cherish the recollection of his lofty spirit and winning manners—simple, sweet and genial. The benevolence of his heart shone out in the engaging smile, in the keen and penetrating yet kindly eye, which gained for him a friend in every acquaintance. No man ever lived whose granite-like probity inspired quicker or more lasting trust. To know William M. Warren was to like him; to know him well was to love him and trust him to the gates of death. And what living creature ever trusted him in vain? His simple word was a tower of strength. When did he ever fail in the whole span of his short but shining life to fulfill his plighted faith with a chastity of honor that knew no stain—nay, when did he fail to beggar his promise by the opulence of his per-

formance? Gifted he was, but his strength lay as much in moral weight as in mental endowment, and his remarkable success was only the destiny of character.

Mr. Warren won many of the great prizes of life—high position, wealth, influence, popularity, business success,—but he never paid any of their tragic penalties. His temper remained sweet, his faith in men unimpaired, his honor unsoiled, his love of humankind unchilled.

It would hardly be fitting at this time to give more than a passing glance at Mr. Warren's beautiful devotion to wife and orphaned child, to parents and sisters. He rose to the full height of all domestic duties: to him, indeed, they were not duties, but joys, for he cherished tenderly every family tie, and he could not draw a cheerful breath until those dearest to him shared in the rich happiness of his young and radiant life.

Mr. Warren had barely crossed the threshold of his fortieth year. Entering the service of Parke, Davis & Company when a lad of seventeen, he rose steadily through its various grades until at thirty-two he filled the highest place in the gift of the House, that of General Manager. At his death his administration was seven years old almost to a day. Its wonderful success has been manifested in a rapid and unceasing increase of the business; in the multiplication of our laboratories and branch houses; in the erection of new buildings, acre after acre; in the successful invasion of foreign markets and new fields of scientific enterprise; in heightened prestige; in the formation of a remarkable corps of veteran executives animated by the principles of their leader and trained to perpetuate his policies. No ambitious merchant could wish a nobler monument than the contributions made by William M. Warren to the power and growth of the great enterprise whose progress was the blood in his veins and the breath in his lungs! The secret of his brilliant career was threefold. He knew how, and loved to discover talent. Into the hands of dozens of obscure and untried men he put the key of opportunity. Wholly free from national antipathy, race prejudice, or social narrowness, he measured his lieutenants by the single standard of ability to produce results. As an organizer, as a co-ordinator and manager of men, his rare gifts would have brought him fame in public life. He had an eagle's eye for opportunity and an

insatiable appetite for fresh enterprise in fields that remain unperceived by the dull vision of the mediocre. In the arts of mercantile construction he was a gifted architect; and to build, to build, was the darling occupation of his bold and aspiring mind. Every actuality, every present-day condition that could affect the welfare of this House was the object of his assiduous study; but his also was the rarer power to connect the present with the distant future by new lines of policy. He had the statesman's instinct for tendencies as well as realities; and when the tendency of to-day became the fact of to-morrow it found him armed and prepared. With the magnanimity of a true leader, he feared no rivals, he reared and trained his own successors that his life-work might survive its author, that the House to which his labour was dedicated might thrive and prosper during the generations to come. Fidelity to a trust receives its supreme, its heroic expression when the Trustee strives to make himself dispensable.

Oh, beloved friend of happy days, partner of our triumphs, architect of our success, may thy serene spirit remain an invisible presence in our lives and comfort our aching hearts. May the sweetness, the strength, the wisdom, the genial cheer of thy young life be distilled upon our souls and sustain us in the task which thou has forever resigned. May thy great, large-minded thoughts be breathed into our toil: may they help us dedicate our lives and our labors to a solemn work which touches the very nerve of pain and human suffering. In our feebleness we could not abridge thine ailment or prolong thy days: may it be given us to cherish, to preserve, and to augment thy handiwork!

The Gera Contract Practice Trouble.—The latest phase is that the sickness insurance societies refuse to pay their whilom medical officers for the last quarter of the year for which they served, claiming that they should be made to pay for the expenses caused the society by their resignations. The physicians have appealed to the courts.—*Journal A. M. A.*

MISCELLANEOUS NOTES.

Pleurisy.—Dr. Colin Campbell, Southport. Eng., L.C.R.P., M.C.R.S., writes in the *Medical Press and Circular*, London, Eng., Oct. 7th, 1903:—

Dr. B. was under my care last winter suffering from a pulmonary cavity. He had had previously two or three intercurrent attacks of pleurisy, which I again found present on Dec. 7th, 1902, accompanied by severe pain over the cavity, and a temperature of 103°. His previous attacks had occurred at his home, where careful poulticing was practicable, but in apartments this was unsatisfactory, and so it occurred to me to try Antiphlogistine.

The material was warmed and "trowelled" on for many inches around the pleuritic centre, then covered with non-absorbent lint and Jaconet.

The result was remarkable; the pain disappeared within an hour, and the high temperature within two days.

Many advantages over poulticing were noticed by the patient; facility of application, no unendurable heat, rapid relief from pain, its adhesiveness rendered movement possible without tight bandaging or the alternative sudden influx of cold air which follows the separation of a poultice from the skin.

Chilblains to many will appear a trifling matter, but as one whose school days in winter were rendered miserable by them, I can assert that they are most maddening. Last winter my daughter, age 11, suffered from them severely. Each time Antiphlogistine was applied, the redness and intolerable itching disappeared in a night. I have tried remedies innumerable with no such result.

"Many a man is today worrying over a case or two of Pneumonia, Pleurisy, or Capillary Bronchitis, whose troubles would flit away like mist did he but know enough to put his patient into a jacket of Antiphlogistine."—*Medical Summary*, Nov. 1902.

I have used more or less of the two elegant preparations, Peacock's Bromides and Chionia during the last two or three years and must say with very satisfactory results.

Mitchell, S. D.

B. A. BOBB, M.D.

I have used Seng and Cactina Pillets in my practice and find that they are all that has been claimed for them. Seng is excellent in those forms of indigestion following chronic catarrh of the stomach and bowels. I like the effect of Cactina Pillets in weak heart. I have used it for the last seven years.

Crawford, Tex.

A. M. ARMSTRONG, M.D.

Febrisol Liquid (Tilden's) an Ideal Remedy.—Is it not true that nine-tenths of the cases of illness coming under the care of a physician are characterized by fever and pain? Is it therefore not obvious that much of the success that comes to medical men is owing to the more or less prompt relief given to these conditions? From this standpoint Febrisol Liquid (Tilden's) should command the special respect of the medical profession as a certain means of making friends, money and reputation. Febrisol Liquid accomplishes these results because of its antipyretic, antiphlogistic and analgesic action, which is

unattended with depressant effects. And most important to observe, it causes no drug habit, and does not like Opium wreck the patient's mind while he is made oblivious of pain. Febrisol Liquid relieves the pain by reducing the inflammation which is the cause thereof. It sets the circulation at rest by calming the nerve centres in the medulla and through its influence upon the vaso-motor nerves it opens the flood gates of the skin producing gentle perspiration and thus cools the blood.

Experience amply shows that there is no more safe, efficient, thoroughly reliable remedy in such conditions than Febrisol Liquid (Tilden's).

Sanmetto Incomparable in Inflammatory Conditions of the Urinary Tract.—I have used Sametto in the various inflammatory conditions of the urinary tract—especially in acute cystitis and prostatitis—with good results. Other preparations on the market that are said to be the same thing are not to be compared with Sanmetto. Shelbyville, Ind.

H. E. PHARES, M.D.

The Coca Plant.—Coca is the leaf of an Erythroxylon shrub indigenous to equatorial America, employed during many hundreds of years, empirically, as a sustainer and restorer of muscular force.

There are several varieties of Coca, among which the aromatic or "sweet" leaf contains little if any cocaine, and is the only kind used by the natives. This is the Classic Coca to which phenomenal properties are ascribed. The "bitter" leaf which they reject, is exclusively employed for cocaine extraction. Even since the popular introduction of cocaine, the natives will not use that alkaloid which creates excitement without sustaining muscular power. Thus it is shown, even empirically, that the properties of True Coca cannot be substituted by cocaine. A fact upon which all observers agree, but which is not yet generally recognized.

Mariani, of Paris, was the first to introduce Coca in available form; he recognized nearly half a century ago the great difference in Coca leaves, and by special blending of the sweet leaves, carefully treated in nutritious French wine, produced his unequaled neuro-muscular stimulant, which, as a trustworthy preparation, has won high standing in the profession abroad and in this country by all practitioners who have subjected it to test.

The Physicians Defence Company seems to have come to stay. Its home office is in Fort Wayne, Ind., and it has a record of which it may well be proud. It is the only company that makes a speciality of defending physicians who are sued for malpractice. It has no other functions and it is the only company in the United States that has made this a speciality. That the services rendered are of the best, goes without saying. Every physician knows that a specialist is better in his chosen field than the mere rank and file. It is the same with this particular phase of legal work. A physician's *liability* policy as its title implies, is a bait because any shyster lawyer is attracted by the prospect, not of getting money out of the physician, but of the company who will advance it for him. On this account it cannot be said to be as advantageous as to have a company which will see to it that a physician wrongfully accused of malpractice is honorably exonerated. We will have occasion to recur to the subject in the future. Meanwhile every physician of any standing in his community should avail himself of the opportunity of entering into a contract with the Physicians Defense Company, said contract costing but twenty dollars a year. The general agent of the company at St. Louis is D. H. Bixler, 314-315 De Soto Building.

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ORIGINAL COMMUNICATIONS.

SCANDALS AT THE LEPER SETTLEMENT OF MOLOKAI.

BY A. S. ASHMEAD, M.D., NEW YORK.

(Concluded)

In an article which will shortly be published by the *American Journal of Dermatology*, entitled "Fish ponds in Hawaii as Propagators of Leprosy," I have thoroughly gone into the question of mosquito and fish transmission of leper-germs, by intermediary host function as it relates to the conditions of Hawaii. A copy of this publication will be sent to the Hon. Secretary of the Interior.

In Hawaii there is an immense acreage of these fish ponds, mosquito breeding places. Many of them were built by the kings and chiefs 250 years ago when fish and sharks were worshipped by the natives. These ponds are found principally in the bays indenting the shores of the islands; and usually were built with lava rock. Most of the Molokai fish ponds were thus built. A few were constructed somewhat interior, and these are filled by the fresh water streams from the mountains, or by tidal water from the sea. These sea ponds usually contain the "Amaama" or mullet, and the "Awa" fish. In the fresh and brackish water ponds the imported gold-fish (from leprous China and Japan), the China fish, "Oopu", Carp and other food fishes, species of the Mullet, of Hawaii are cultivated. Besides, the fish which come in through the open gates, the owner usually has men engaged at certain seasons of the year in catching young Amaama (mullet), and Awa in the open sea and bays, and transporting them alive to these fish ponds. Without mentioning the other islands of the Hawaiian group, I will only say here, that the acreage of fish ponds in Oahu is

3643 acres, that of Molokai amounts to 1205 acres, in Kauai there are seven ponds, whose acreage is not given, in Maui where sheep raising is the main industry, there are only 51 acres, and in Hawaii 113 acres. The total catch of Amaama fish (mullet) in Molokai ponds was 92,000 pounds, besides other species of mullet. The island of Oahu has 74 fish ponds, Molokai comes second with 15, with a total investment in Molokai in them of \$11,709. The total investment for all the islands is \$168,943. The total fish pond catch for Oahu was 560,283 pounds, valued at \$139,714, Molokais 92,000 pounds of mullet valued at \$22,980. The fish-pond catch for all the islands was 682,464 pounds, of which the Amaama or mullet comprised 485,531 pounds. This disposes of Mr. McVeigh's statement that "Mullet are not deep water fish, and are practically not known at the Leper Settlement as the water near the shore is hundreds of fathoms deep."

The Amaama is one of the fish usually salted down, and kept for a long time.

At present but little deep sea fishing is done by the fishermen. Formerly natives did all this fishing, but the Japanese now monopolize it. Some of the best grounds are off the coast of Molokai, and quite a fleet of Japanese boats from Honolulu resort to them.

"The sea ponds usually contain only the Amaama (mullet) and the Awa. In the fresh water ponds, gold-fish, opai carp, aholehole, and okuhekuhe are kept." (Report of U. S. Commission for investigation of Fishes and Fisheries of Hawaiian Islands, 1902.)

Mr. McVeigh would have us believe that very few lepers at Molokai have diseased hands, and therefore it is not a danger to the general health of the community, to have them handle fish intended for the healthy population. For he says: "Many of the lepers are but slightly tainted, the disease takes on many different forms, and is often on the clothed portions of the parties only, and but slightly marked. Many lepers are very strong and vigorous, etc."

Governor Dole himself has testified before the Senatorial Investigation Sub-committee: "The Hawaiians eat out of the same poi bowl with their fingers, they are constantly kissing each other." Hon. Wm. O. Smith, ex-president of the

Board of Health testified: "Generally the fingers drop off; I have seen a man living with both feet and both hands gone. Some are extremely repulsive." Mr. McVeigh also testified that "168 lepers were helpless." He said, as to the degrees in the way in which these people are affected; "Some are a good deal worse than others; tubercular cases are the worst; they have sores on the body, face and hands, and on the feet."

Dr. Alvarez, in his report to the President of the Board of Health, Honolulu, advised that "a sight of so many distorted forms and faces might serve to awaken in the minds of visitors a wholesome dread of the disease, and rouse them to the necessity of protecting themselves."

Now, according to Dr. Mouritz, of Mapulehu, Molokai, of 652 lepers of Molokai, 333 were tubercular, the type with sores, and 204 were anesthetic, or nerve leprosy, while 115 were of mixed type. Therefore, the point made by Mr. McVeigh against my contention, that leprous hands and feet are dangerous contact to food intended for the healthy, is not well taken.

As to fish being proper food for lepers when substituted "in lieu of meat ration," and that "one pint to two quarts of milk per day is sufficient food for lepers," I have only to quote the causes of death of lepers to prove the fallacy of it. Here is a recorded death list of Molokai lepers: "Exhaustion, consumption, diarrhea, tuberculosis, pneumonia, chronic pneumonia, leprosy gangrene, pyemia, leprosy nephritis (kidney disease), leprosy phthisis, gangrene, phthisis pulmonalis, leprous exhaustion, pyemic leprous exhaustion, consumption, etc." All these are conditions requiring *much* meat juice and pure milk.

Dr. Cooper, President of the Hawaiian Board of Health, not only states that "from one pint to two quarts of milk daily is allowed each leprous patient at the Molokai leper settlement," but, he further says: "The settlement has a large dairy, at present milking ninety cows."

I beg to say, in reply to this, that according to the testimony of those in authority at the settlement, as given to the Sub-committee of Investigation of the U. S. Senate in 1902, there were 1009 patients at Molokai. And Rev. Father Mulhaus wrote me, January 26, 1903: "A recent letter from Molokai says that there are at present about 870 lepers. Isola-

tion is doing its work; in 1890 there were 1,213, in 1897, 1,100 of these unfortunates."

Besides this evidence as to the population of the settlement, the statistics given by the Governor's annual report to the Secretary of the Interior show that "from 1891 to 1900 the average number of lepers was 1,096, and of deaths, 134.5."

Judge Humphreys has stated that on September 9, 1902, the population of the leper settlement was as follows: Lepers, 858; kokuas (attendants), 58; non-leprous children (who, according to the Superintendent, were 50 per cent of them illegitimate), 75; other well persons, 16. Total of persons living at the settlement, 1,007.

Now, may I ask Dr. Cooper, how he makes ninety cows (Hawaiian cows, on poor pasture) give milk enough to supply all these people with milk, or even the lowest number given of the lepers with "from one pint to two quarts a day?" When we consider that in summer time the Board of Health turns these cows into the "taro" patches (to which the lepers strongly objected), and that this "taro," unless plenty of water is supplied to it, will not grow well (and complaint was made that this could not be done), we conclude that the Hawaiian cows must be in too poor condition to give much milk.

Let us say, then, that, at the outside, each cow gives ten quarts of milk a day, which I very much doubt is the case, and that all of them are "fresh" the whole year round, which would be an impossibility, even thus it would not allow "from one pint to two quarts" of milk daily to each leper. Nor does the published ration table of the leper settlement even mention milk as a regular diet for lepers.

To arrive at some positive conclusion about this matter, I addressed a letter of inquiry to the superintendent of Briar Cliffs farm, up the Hudson river, whose cows give milk that is in much favor with the medical profession of New York City. These cows are superior cows, probably far better milkers than those of Molokai, Hawaii. Mr. Jesse Coddington, the superintendent of the farm, writes me Dec. 14, as follows:

"Yours of the 10th inst. at hand. In regard to cows, you would have to expect about one-fifth of your cows to be 'dry' all the year round. The rest of them, if well cared for, would

average about eight quarts of milk per day, which would mean less than six hundred quarts per day for ninety cows, and that, I think, is a very good average. I shall be glad to favor you with any other information that I may be able to give.

(Signed) JESSE CODDINGTON,
Superintendent."

I also wrote to Dr. Edward F. Brush, the famous kumyss manufacturer of Mount Vernon, New York, Here is his reply, dated Dec. 17th:

"Replying to your letter of Dec. 10th, I cannot give you definite answers, only approximate. Of course, it largely depends on the variety of cow and the help. Ordinarily a herd of cows ought to average 10 quarts per cow—that is, with 90 in the herd, under good management, there should be about 900 quarts of milk per day, and there should be about ten cows out of commission most of the time—that is, dry cows about to calve. I hope I have made this satisfactory, with the understanding that, of course, nobody could make an exact answer to your questions.

(Signed) E. F. BRUSH.

(Dr. Brush has a magnificent herd of high-bred cows.)

I fear, therefore, that Dr. Cooper, President of the Hawaiian Board of Health, has exaggerated on this matter to meet the exigency of the criticisms contained in my former letter to you, Mr. President—"that meat and milk are neglected by the Hawaiian Board of Health as food for lepers."

May I say here, further, that in 1866 there were 155 lepers out of a population of 60,000 Hawaiians: one leper for 387 Hawaiians. Now there are, counting those not kept at Molokai, 1,650 lepers, out of a population of 30,000 Hawaiians, or one leper in every 19 Hawaiians. Dr. Alvarez says: "This is not in accord with the statement that we have nearly succeeded in stamping out leprosy among our people."

Dr. Morrow, a high New York authority on leprosy says: "Segregation of leprosy in Hawaii is a failure, the disease there is on the increase." Dr. J. Ashburton Thompson, Chief Medical Officer, Sydney, New South Wales, who has made the best analysis of Hawaiian leprosy says: "The outbreak of leprosy in Hawaii is not declining."

Dr. Souton, of Paris, a noted leprosy expert, left Hawaii "very much disappointed" with the way the law of segregation was being carried out. He criticized "the lack of *Medical* treatment for leprosy" in the following words: "No attention

is paid to the treatment of leprosy; there is a physician at Kalawao, but his time is taken up with treating accidental maladies." He concludes as follows: "The government spends a considerable sum every year to maintain the two villages of Molokai (Kalawao and Kalaupapa). Every leper costs 450 francs a year, thus imposing an appropriation of 500,000 francs. If we admire this generosity, we cannot help regretting the form under which it is applied, and the insufficiency of the results obtained."

Dr. Alvarez, of Honolulu says, "that the suspects or lepers live in every district of these islands. Honolulu itself contains a large number of them, and in his opinion they are the most potent factor in continuing the spread of the disease, thus nullifying the salutary effects of segregation."

The true fact is that leprosy in Hawaii, under the inefficient local government is being eradicated *naturally*, in spite of the authorities, by the death of the race. When all the Hawaiians are dead, then there will be, of course no Hawaiian leprosy. Will Governor Dole and his laudators then claim that they have conquered this disease? Our Government at Washington should at once assume full charge of this important problem, by putting the leper settlement of Molokai in the scientific hands of educated physicians like those of the United States Public Health and Marine Hospital Service.

The Local Government rations allowed the lepers per week is given in the report of the Investigating Committee of U. S. Senate last year, as follows: Beef, seven pounds; Salmon, five pounds; fresh fish, seven pounds; "pai-ai," a native food prepared from the root of *Colocasia esculenta* often called "poi"; one bundle or twenty-one pounds ("Taro"); rice nine pounds, with one pound of sugar along with it; bread, eight and a half pounds, *with one pound of sugar along with it*; flour, twelve pounds, *with one pound of sugar along with it*. When fish, therefore, caught by the lepers was substituted for their meat ration, their diet became all fish excepting vegetables, starches, and sugar, and thus a great wrong was done to the lepers.

In the report of the U. S. Senatorial Sub-committee on leprosy in the Hawaiian Islands, (and Porto Rico), composed of Senators John H. Mitchell, of Oregon, (whose State ships salmon to Hawaii); Jos. R. Burton, of Kansas; Addison G.

Foster, of Washington, (whose State ships salmon to Hawaii); and J. C. S. Blackburn, of Kentucky. I read: Hon. "W. O. Smith, Ex-President of the Hawaiian Board of Health, testified that in his opinion, leprosy was contagious by inoculation, rather than by heredity or contagions proper." Mr. Wilcox testified that an Investigating Committee of the Hawaiian Legislative found that a store was run at Molokai, where rotten salmon, rotten bread, rotten clothes were sold, and the Board of Health "made ten per cent. out of it." Cross-examined by Judge Humphreys, he said, that the "Board of Health run this store over at Molokai so that certain merchants could unload on the lepers their shelf-worn goods, and that he knew some members of the Board of Health who do this, that is send up bad things to the poor lepers and charge full prices for them." George Markham testified that Mikila, a leper, "was thrown into Kalaupapa prison because he stole a sheep or a goat (to eat?) where he died in a dungeon literally covered with maggots." Senator Mitchell asked this witness: "Are lepers not properly treated?" and Mr. Markham answered: "They have salmon that is not fit to eat." The lepers of Kalaupapa and Kalawao petitioned the Legislature, "that the Board of Health be prohibited from claiming any share in the "taro" produced on the farm of Waikolu. Superintendent Reynolds testified that, plenty of "taro" used to be *tabu* for the lepers, when Waikolu was used for keeping the stock of the Board of Health during the dry season. These "taro" patches had to be fenced in to keep out the wild pigs and wild hogs of the valleys. The lepers were allowed to go into the patches, and help themselves. The "taro" was used by the lepers in making their favorite dish, "poi." Senator Baldwin (Hawaii) asked whether they sold it to the Board of Health, and Superintendent Reynolds answered that, "What is raised in other places than Waikolu, such as Wailua for instance they *can sell themselves*, but all the Waikolu "taro" must be delivered to the Board of Health. Sixteen thousand dollars worth was raised in one year by seventeen of the "taro" planters. Assistant Superintendent Feary was severely criticized by the lepers at Molokai for various harsh treatments. Keha, a leper, said that: "If the Board of Health repaired his house, even by putting one shingle on it, at his death the home goes to them, and his wife and child would have no

claim on it, the Board of Health takes it all." Mr. Notley testified that: "He was forty-two years old, married, and was a leper. He had resourses outside of the Board of Health appropriation. He had also daily work, being interested in the coffee shop business." "To what extent is the coffee shop patronized in the community? Do many Hawaiians patronize a place of that character (run by a leper)?" were asked. He answered: "Yes." "What is the average attendance daily?" Answer: "According to the state of the weather; twenty or thirty at a time will come," His income was \$200 a month. "In running a coffee shop do you pay a license?" Answer: "No, it seems the control of the license is in the Board of Health, I pay no license." He charged that a lot of beer making and "Swipe" drinking was the greatest cause for disturbances among the population. "Swipe" is made out of *Sugar* and hops, and a lot of things a good man would not touch. Gin, alcohol, and "papai-ai" chopped up are mixed with the "swipes"; "ti" root, and pine-apples are also used in making strong drink. *The excess of ration of sugar* is used by lepers in making strong drink of, and they buy *smuggled* hops. Besides there are many great "awa" drinkers.

Another leper testified that: "here in the settlement are lepers selling 'awa.' Persons addicted to the 'awa' habit buy it at a high price. The man who had the 'awa' license for the island of Molokai used to send us 'four stumps' for a dollar, which would last us four full days, that would give us four nights of joy (drunkenness). Now we can only get one cupful. "Who is raising it?" was asked. Answer: "A leper."

It would be unfair to refer too particularly to the subject of immorality among the lepers at Molokai, but I shall mention here, that it is wrong from a scientific point of view to keep the illegitimate children there: 50 % of all the children born at Molokai are illegitimate, 45 were born in two years according to Mr. McVeigh. Some are kept there until they contract leprosy. Girls from the leper settlement are allowed to marry outsiders. Sometimes they are kept as "assistants."

The Sub-committee of Congress has reported: "It was made plain to your Committee that immorality in the unrestricted illegitimate association of the leper patients is permitted by those in charge of having control of the leper settlement. The

only attempt seemingly to abate or minimize this evil is by counseling and earnestly urging marriage on the part of lepers, even going so far in this direction as to aid in facilitating divorces where a leprous man or woman has a wife or husband outside of the settlement, so this husband or wife thus released from the marriage obligation might again be married to a leper and inmate of the leper settlement."

Here is a letter that was written by a resident catholic priest of Molokai:

Kalaupapa, Molokai,

March 25, 1902.

Mr. Judge Humphreys.

DEAR SIR.—Please be not offended that I, a perfect stranger, take leave to write privately to you for advice. The Molokai settlement, under the exclusive control of the Board of Health, needs an impartial investigation. Allow me to mention a few doings of the officials which seem to me to be incorrect.

1. The greatest stain of the settlement is the unlawful, but by the Board of Health tolerated, cohabitation as man and wife of single or married persons. Over 100 of such couples living in concubinage or adultery can be found in this "Iwilei."

The majority of the children born here are illegitimate. The supposed desire to prevent as much as possible the undesirable offspring of leprous parents should have been enough to induce the authorities to favor morality; but then immorality makes the place attractive to the leper, and wallowing in the mire, his energy has gone and his possible outcry drowned. The Board of Health lets things go, and the lepers, whites and natives, with very few exceptions (outside of the two Homes), are quite pleased in this Augean Stable. Drunkenness receives the same favor.

2. The Board of Health being attacked about the prevalent immorality, claimed that the enforcement of law and the administration of justice belonged to other departments. It should be so, but it is not so. The acting Superintendent, the representative of the Board of Health, is at the same time the (—), by the sheriff appointed head of police in the settlement, hence Board of Health and police are united in the same person.

Now, how about the judiciary department? There is no judge here, he lives on the other side of this island, and is not allowed to come to the settlement without an invitation of the acting Superintendent. The last time the judge was here was in November or December, 1900.

The acting Superintendent breaks into houses without a warrant, as the chief of police, he arrests persons supposed of being offenders, confines them in prison, keeps them there for

months or as long as it pleases him, The lepers, as a rule, accept such treatment, and what else can they do?

When a leper thinks himself injured by the Representatives of the Board in matters belonging to that body, and when he complains to the Board, the matter in dispute is always referred back to the accused authorities, who become thus judges in their own cases.

The administration of justice requires the presence of legal advisers, etc., and the right to appeal without this important, but certainly embarrassing right, the appointment of a resident judge here in this narrow community under the thumb of the Board of Health, would be a very questionable gain, and should he be a member of this community, or a native, the lepers would go to court as often as possible for the fun.

Healthy persons (Kokuas) are allowed to stay with and care for their sick relatives, etc. These persons are forced to work for the Board of Health where and when the Board orders them to work, or must leave the settlement.

These few points are enough to give you an idea of the management of this Institution. Is it correct, and if not, how can it be remedied? The legislature has failed. Letters when accepted by newspapers attract only the attention of the authorities here, for revenge. The lepers are too indifferent, jealous, and greedy to act in harmony. You would do me a favor to give me an idea of what to do, but this matter is strictly private.

Yours very respectfully.

FATHER WENDELIN.

There was a Mormon clergyman in Molokai. Asked as to what this man was there for, Mr. Smith replied: "Among the Hawaiians there are a good many Mormons. He holds meetings at his church." Senator Burton asked Mr. Smith: "Does he teach polygamy?" Mr. Smith answered: "No; it is not allowed in this country." I beg to say that that is just what that Mormon is allowed in Molokai for—to preach polygamy and remove the natural prejudices against the lepers who have wives outside and who are induced to marry again at Molokai.

Judge Humphreys, in discussing the leper question, said: "This is going to be the policy of the United States—to establish a lazaretto for the lepers in the United States. As far as I have been able to sound public sentiment, the lepers of Hawaii would look upon the change from the control of the Territory of Hawaii to the National Government as a great boon.

"Senators, I doubt if there are twenty-five men in Honolulu to-day, to show how carelessly the leper settlement is run by the Board of Health, who can tell you the name of the physician

of these lepers. Within the last six weeks, a physician who drank, deserted his wife and children, was put in charge of the lepers, with no regard for public opinion and public sentiment. They sent him there, and within the last month discharged him. The newspapers did not say why. But I was informed they discharged him because he had improper relations with the female lepers in its criminal and revolting sense. This man was put in complete control of the lepers. It is a thing to chill one's blood in his bones."

Hon. Wm. O. Smith, ex-President of the Board of Health of Hawaii wrote me, from Washington, last March: "The community at the islands is very much opposed to the suggestion that Molokai be made the National Leper Asylum, and we were astonished to learn that the Senate Committee had recommended that it should be adopted. Since arriving here (Washington, D. C.), I am led to believe that the proposition meets with disfavor in every quarter."

The Hawaiian Board of Trade memorial says: "In Hawaii occidental and oriental civilizations meet in a contest paralleled in no other country on the globe.

"When the time comes that the oriental aliens, as a body, insists on a corresponding standing of living and family *status* to that of the white man, the danger of the overthrow of Caucasian civilization in the Orient will cease. To attempt to regulate by laws their difference is well nigh impossible. It is in the power of National Legislation to throw the government patronage in support of civilizations they embrace and expect to have preserved for them and their successors."

The only way, I think, to conquer the spread of leprosy in Hawaii is to change some Oriental practices into Occidental ones—for instance, instead of fish diet, give them meat and milk.

National and not local government of leprosy questions is absolutely imperative.

According to the provisions of the Platt-Wanger leper bill, now before Congress, a National leper home should be built in the center of Yellowstone Park, or in some other part of the interior away from the seacoast, for the lepers of our States. Molokai should be kept as a lazaretto for Hawaiian lepers, Cabras Island for Porto Ricans. There is already one provided

for the Filipinos on the island chosen for the purpose in the Philippines, and one in Guam. All these lazarettos should be under the jurisdiction of our National Government. Our Marine Hospital officers should be placed in full charge of them, and local Boards of Health should have nothing whatever to do with them, excepting to find and turn over to them the lepers. The Perkins-Wilcox leper bill, which, in its second section, provides for expatriation of the lepers of our States, by sending them to Molokai, should never become a law.

I beg leave strongly to recommend to our Secretary of the Interior that the care and maintenace of all these leper asylums be taken from the local governments and given to the U. S. Public Health and Marine Hospital Service, and for which Congress should be asked to make extra appropriations.

I have the honor, Mr. President, to be

Your most obedient servant,

ALBERT S. ASHMEAD, M.D.,

Late member of the Provisional Committee, Berlin Leper Conference.

[Subsequent enclosures:]

Department of the Interior.

Washington, Dec. 31, 1903.

Dr. Albert S. Ashmead, 333 W. 23d St., New York City.

Sir:—Your letters of December 6th and 21st have been received, in which you take exception to statements contained in the reports of Mr. J. D. McVeigh, Superintendent of the Leper Settlement at Molokai, and Dr. Charles B. Cooper, President of the Hawaiian Board of Health, transmitted to this Department by the Governor of Hawaii, and criticize the administration of said settlement, recommending that Supervision thereof be transferred to the United States Public Health and Marine Hospital Service; and I beg to inform you that said letters have been forwarded to the Governor of Hawaii for consideration, note and return.

Very respectfully,

THOS. RYAN,

Acting Secretary.

A BILL for the better control of the lepers and leprosy questions of the Territories of the Philippines, Guam, Hawaii, and Porto Rico.

BE IT ENACTED by the Senate and the House of Representatives of the United States of America in Congress assembled :

SECTION I. That the control, management and government of the lepers and leper settlements and all scientific and other questions pertaining to them of the Philippines, Guam, Hawaii and Porto Rico are hereby taken from the local health authorities and given to the Public Health and Marine Hospital Ser-

vice, whose medical officers shall at once assume full charge of them.

SECTION II. That special appropriations for this purpose shall be made by the Secretary of the Treasury in conformity with the suggestions and detailed estimates of the Supervising Surgeon-General of the Public Health and Marine Hospital Service

SECTION III. Nothing in this act shall be construed to mean that the leper asylums at either of these places shall be made a national leper asylum for lepers from the United States proper. Lepers in the States of the United States must not be transported to Molokai, the Philippines, Guam or Porto Rico.

[THE END]

REPORT OF A CASE OF HYDROPHOBIA WITH AUTOPSY.*

BY G. MORTON ILLMAN, M.D., PHILADELPHIA.

I think it prudent to report this case for discussion because of the fact that proper precaution, protecting human life from one of the most distressingly fatal infections known to mankind, is overlooked, especially in the large communities in America. In some instances the very existence of the condition is questioned by a few members of the medical profession and by the laity.

The patient was a well-developed male, aged 37 years, and an electrician by occupation.

Family History: His family history was negative with the exception of the fact that his mother died of phthisis.

Previous Medical History: Investigations as to the previous medical history showed that the patient had been a comparatively healthy man with the exception of a slight persistent cough, with which he had suffered some years ago, but had ceased after the patient discontinued the excessive use of tobacco.

Two years ago the patient met with a severe accident necessitating the partial amputation of three fingers of the right hand. This accident was followed during the present year by a severe burn of the right arm and forearm. The patient was just recovering from the latter condition when, upon attempting to

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caress a strange dog, he was bitten in the palm of the left hand, in the web between the first two fingers.

The wound was thus inflicted August 23, 1903. It bled freely at the time and was cauterised one hour later with a solution of silver nitrate (of questionable strength) followed by pure carbolic acid, and an antiseptic dressing applied. The wound healed kindly without any decided complications.

Premonitory Stage: In the evening of October 1, 1903, just 39 days after its infliction, the patient's attention was attracted to his left hand by a tingling sensation in the tips of the fingers and cicatrix. His wife states that during the following two days he appeared to be greatly depressed, restless at night, had little or no appetite, and complained of a constantly increasing aching sensation in the left hand and arm.

Spasmodic Stage. Upon arising from bed in the morning of October 4, the patient complained most decidedly of the left hand, arm and shoulder, and of a pronounced feeling of debility. He went to breakfast, however, as usual, and while at the table asked for a glass of water, and upon attempting to swallow the liquid it was suddenly and involuntarily expelled from his mouth. He then went up-stairs without assistance and lay upon a couch, complaining at the time of feeling extremely weak.

At 10 o'clock A.M. I was asked to attend the case and found the patient decidedly restless, and complaining, in addition to the aching arm and shoulder, of being very chilly. The skin was moist, the muscles relaxed, reflexes normal, and face flushed. Pressure along the nerve trunks and muscles of the left arm and shoulder was slightly painful, but did not seem to be productive of any local or general spasm. Attempts at prolonged conversation, however, seemed to cause, from time to time, a sudden involuntary laryngeal spasm, after which the patient would be unable to immediately resume talking because of a marked dyspnea thus produced. The temperature at this time was 101° F.; the pulse 102; and the respiration, when regular, was 24.

Upon receiving the history of the patient's inability to swallow water while at breakfast, I decided to prescribe an antirheumatic in powder form, to be taken with water during my absence, in order to avoid arousing the patient's suspicions regarding my belief in his ability to swallow liquids as usual.

At 3 o'clock in the afternoon I was informed that after a great effort he had swallowed one powder, but that a repetition had been absolutely impossible, and furthermore, that he had refused all liquids and solids at lunch time.

There was now a pain on the left side of the neck which seemed to be most marked along the posterior borders of the trapezius and sternomastoid muscles, radiating towards the occipital portion of the skull.

The patient complained of an almost constant smothering sensation in the larynx, and the slightest efforts to talk would now very readily provoke a laryngeal contraction, during which time the patient continually held his hand to his throat in an effort to relieve his dyspnea, and was extremely restless. The temperature continued to be 101° F., the pulse was 98, and respiration 26.

Feeling that future treatment of the patient depended upon an absolute surety as to the diagnosis, I asked Dr. Samuel Wolfe to see the case, and after a very careful examination of the patient and consideration of the definite history Dr. Wolfe came to the conclusion that the case was almost certainly one of true hydrophobia. The actual state of affairs was at once explained to the family, and thus all obstacles to future treatment eliminated.

At 6 o'clock the same evening (10 hours after the first appearance of active symptoms) it became necessary to resort to hypnotics to control the spasms, which were now becoming very much longer in duration and decided in severity. An eighth of a grain (gr. $\frac{1}{8}$) of morphine and one one-hundred-and-fiftieth grain (gr. $\frac{1}{150}$) of atropine were accordingly given hypodermically with a very beneficial result, enabling the patient to obtain a much needed rest of 4 or 5 hours' duration.

It became necessary to repeat this injection 6 hours later, at which time there was a noticeable hyperesthesia of the left side, especially marked at the time of puncture with the hypodermic needle.

The patient's general appearance was now that of the decidedly sick man; and one whose suffering was of anything but an hysterical nature, his manifest desire to assist with his treatment, and avoid worrying his family being most pronounced.

The second administration of morphine and atropine had only been beneficial so far as the respiration was concerned, the injection being repeated at 5:30 A.M. ($5\frac{1}{2}$ hours after the second administration) with better results, especially upon the severity of the laryngeal spasms; but with no decided effect upon the severity of recurrence.

All attempts to have the patient take food of any variety by the mouth failed, and nutrient enemata (of beef) were resorted to and retained, being given always after a hypodermic injection of the narcotic.

In the afternoon of the second day of the spasmodic stage, Drs. M. P. Ravenel and D. J. McCarthy were called in consultation and made a careful examination of the patient, especially as regarded the nervous symptoms, and stated that in their opinion the case was undoubtedly one of hydrophobia.

There seemed to be a slight tendency to increased salivation during the past six hours, and now, regardless of the atropine that had been given, there was a moderately abnormal flow of saliva, probably caused, to a certain extent, by the almost continual working of the patient's jaws and tongue.

With the approach of evening the general condition became gradually worse, and at 8:30 P.M. a series of spasms developed, extending over a period of thirty minutes.

During this series of paroxysms there was increased salivation, intense dyspnea, rolling of the eyes, continual change of position, marked eructations of gas, and the passage at this time of about 6 ounces of urine, making 10 ounces passed within five hours. Delirious symptoms now became noticeable, but occurred only at intervals of two to three hours, and were of very short duration.

During the course of the next ten hours but two administrations of morphine were necessary, the patient resting fairly quietly until Tuesday morning (October 6, the third day of the spasmodic stage), at which time control of the patient became a difficult matter. The excitement became maniacal, and it was feared the patient would do himself personal injury, although, his entire appearance was at times one of terrible fear, and he would hold his throat with both hands in a frantic effort to relieve his dyspnea. Attempted inhalations of chloroform at this and other times gave no relief, and only seemed to increase the suffering by its presence.

After some effort one one-hundredth of a grain (gr. $\frac{1}{100}$) of hyoscine hydrobromate was given hypodermically with a very gratifying effect. This dose of hyoscine was repeated three hours later, and was the last administration of a hypnotic of any kind that was necessary during the remaining course of the disease. The temperature was now 101.6° F., the pulse 124, and the respiration 44.

Paralytic Stage.—A few hours later, a gentleman who saw the case pronounced it to be one of hysteria of a remarkable type, and was so positive as to his diagnosis that it was decided to put the patient upon hysterical treatment. Accordingly all medicinal administrations, rectal feedings, etc., were discontinued, and no one except the nurse or a substitute allowed in or near the room. Twenty minims of sterile water were given hypodermically every two or three hours, and the nurse informs me that there was absolutely no effect as to the frequency of the spasms, but there seemed to be a steady decrease in the severity, regardless of the time at which the injections of water were given. In other words, it was very apparent that, regardless of treatment, the patient was slowly passing into the paralytic stage of hydrophobia.

The patient now began to perspire profusely, and vomited for the first time about 4 ounces of yellowish, frothy mucus. The profuse sweating continued, and a few hours later both pulse and respiration began to fail rapidly. It became very evident that a return to medicinal treatment was necessary, and one-fiftieth of a grain (gr. $\frac{1}{50}$) of digitalin, and one one-hundred-and-fiftieth of a grain (gr. $\frac{1}{150}$) of atropine were given hypodermically with much benefit.

The periods of delirium were now of frequent occurrence and of long duration. When rational the patient declared that the choking sensation had entirely gone from his throat, and that he was now smothering from an oppression over the epigastrium, and during a spasmodic attack would put both hands to this region instead of to the larynx as formerly. It was, therefore, decided to endeavor once again to administer a liquid by way of the mouth. Two ounces of milk containing a fluid dram of whiskey were brought to the patient, and with a little assistance and encouragement the entire contents of the glass were swallowed without any great effort. On finding himself

able to swallow liquids again the patient asked for a cup of coffee, of which he drank a few drams. About thirty minutes later both coffee and milk were vomited, and all efforts to repeat the same were forcibly resisted.

In spite of stimulants the pulse and respiration failed steadily, and the patient became permanently unconscious, at which time 20 minims of ether were given hypodermically, and resulted in a sudden general clonic muscular spasm.

External heat had been constantly applied to the trunk and extremities, and digitalis or atropine given, either together or separately as occasion demanded, until the patient's death of respiratory failure at 7 A.M., October 7, three days (71 hours) after the onset of active symptoms, and nearly six days after the onset of prodromal symptoms.

The hyperesthesia was a prominent symptom throughout the course of the disease, and became gradually more pronounced until finally, both before and after unconsciousness, warm applications could only be placed to the extremities very gradually and retained in position with difficulty. Hyperesthesia, as a rule, was most marked in the left side. Very slight stimulations, such as the sudden entrance of light to the room, the running of water and the ringing of the door bell, were many times provocative of a spasm. The reflexes were increased and the plantar reaction always downward. The pupils became dilated and non-reactive about eight hours before death.

Delirium began to manifest itself about thirty-six hours after the onset of active symptoms, became more prominent during the administration of hyoscine, but was still present during the period of nine hours when the patient was receiving no medicinal treatment, and continued to the period of unconsciousness.

During the entire course of his illness there was never made in the presence of the patient any mention of or reference to dogs or hydrophobia, and he was made to believe, so far as possible, that he was suffering from rheumatism of the throat muscles.

At no time during his illness did the patient simulate in any manner the actions of a dog or other lower animal, although he frequently referred to the dogbite as being the cause of his present condition.

The temperature showed a gradual rise until the second day

of the spasmodic stage, when it reached 102° F., after which it ranged between 101.8° and 100°.

The inspiration when at all regular, varied from 28 to 40, and simulated at times a Cheyne-Stokes respiration, especially after a series of laryngeal spasms. After unconsciousness, ether dropped on the larynx and upper portion of the chest brought about a prompt respiratory reaction.

I had an opportunity to make but one examination of the urine, the specimen being collected during the second twenty-four hours, after the onset of active symptoms. It was high-colored, decidedly acid, and showed a specific gravity of 1040; there was no albumin nor sugar present. No microscopical examination was made.

PROPHYLAXIS: All linens, towels, etc., used around the patient, especially those contaminated with saliva or vomit, were at once thrown into scalding water and later boiled. After death, all needles, thermometers, spoons, etc., were either destroyed or sterilized, and the floors, bedding, and furniture thoroughly wiped off with a strong solution of carbolic acid.

AUTOPSY: The autopsy was made ten hours after death by Drs. McCarthy and Ravenel, with the following results:

The *lividity* of the dorsal surface of the body was very marked, and *rigor mortis* of the upper and lower extremities very well developed.

The *skull* was thin. The *brain* and *membranes* were normal, both over the convexity and the base.

The *spinal cord* and its *membranes* were of normal appearance, as were the *pancreas*, *adrenal glands*, and *spleen*.

The *lungs* showed some adhesions in the right pleural sac, a rather marked emphysema along the anterior border of the right lung and an area of healed phthisis at the right apex.

The *liver* showed a slight passive congestion, otherwise normal.

The *heart* was normal with the exception of a patch of old pericarditis on the anterior surface.

The *kidneys* appeared to be normal. The inner surface of the *larynx* was covered with a dirty mucus and there was considerable frothy mucus in the *trachea*.

MICROSCOPICAL EXAMINATION: The microscopical examination of the central nervous system shows typical tubercles.

of Babes in the *medulla*. The round-cell infiltration around the bloodvessels was very distinct.

Sections of the *cerebral cortex* and *base of the brain* show no evidence of inflammatory change.

Sections of the *Gasserian ganglion* and also of the *inter-vertebral ganglia* show a round-cell infiltration in the stroma, a diffuse chromatolysis of the ganglion cells, and a vacuolation of some of these cells, with a proliferation of the capsular cells, in most areas of only moderate degree, but in some areas filling up the entire capsule.

The *peripheral nerves* and the *anterior* and *posterior roots* show no change after careful investigation.

Microscopical study of the viscera gave perfectly normal appearances in all the *viscera* with exception of the *kidney*. These sections show some congestive swelling of the glomeruli and a cloudy swelling going on to marked degeneration of the cells of the tubules.

In other words, pathological lesions typical of hydrophobia were found in a case associated with parenchymatous nephritis. Neither the pericellular or perinuclear round-cell accumulation of the central nervous system nor the lesions of the intervertebral ganglia are seen in cases of nephritis.

INOCULATIONS: Three rabbits were subsequently inoculated from the medulla of the patient, with the result that all three rabbits died after a period of seventeen to nineteen days, presenting typical symptoms of rabies, and subsequent sections made from the nervous systems of these rabbits showed pathological changes typical of rabies and corresponding to those found in the nervous system of the patient.

THE DOG: The dog was of the small terrier type, showed no sign of rabies, and is said to have been playing with some children only a short time before biting the patient. The killing and cremation of the dog prevented a subsequent autopsy.

I close this report with the earnest plea that an effort will be made to have constituted or enforced the proper laws, compelling the muzzling and quarantining of dogs at all seasons of the year, that society may thus be protected from the fatal condition, and that if possible, it be thus completely eliminated, as is the case in many foreign countries, notably Australia.

CAECAL OR BLIND ENDING URETER.

BY BYRON ROBINSON, CHICAGO.

The case I here present of caecal or blind ending ureter with illustrations arose from a man. The enormously dilated distal ureter pelvis and calyces is well shown in the illustration

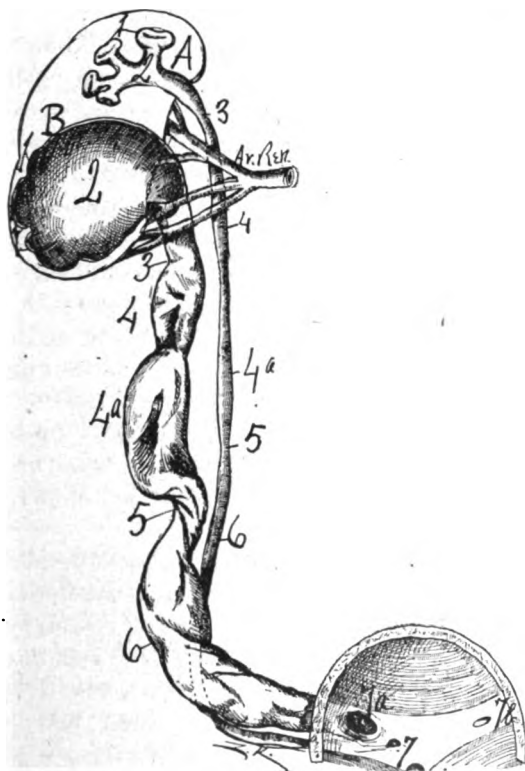


Fig. 1-

(Fig. 1.). The right kidney presents a distinctly separate and duplicated calyces, pelvis and ureter proper. The distal ureter is the one dilated, hydroureter. Evidence of long continued distention and consequent dilatation is evident from the fact that the pelvis and calyces and ureter proper, practically form a single continuous channel, cyst. I have demonstrated in a number of cases that dilatation of the ureter occurs almost entirely in normal points of ureteral dilatation, not at the ureteral isthmuses. For example, the proximal ends of the calyces, at

the fornices of the calyces, will present large dilatations whereas the neck of the calyces will present scarcely any dilatation. In short, in ureteral dilatation the ureteral dilatations (reservoir) are the localities which enlarge, and not the ureteral isthmuses or constrictions. This makes ureters dilated appear as if they really had strictures. The accompanying complete right unilateral duplicate ureter presents the usual ureteral dilatations and constrictions. The abnormally dilated ureter still retains evidence of original ureteral dilatation and constriction. Ureteral valves and spirality are also evident as well as flexuosities and sinuosities. The proximal ureter possesses the normal, usual dilatations (1, 2, 4, 4a, 6,) and constrictions (3, 5, 7,) Fig. 1. The proximal ureter passes dorsal to the distal ureter, crossing at the pelvic ureteral dilatation. The bloodvessels are carefully drawn in fig. 1 according to the specimen which shows a single normal trunk of the arteria renal as but abnormal branching of some i.e., its original distribution is for a duplicate pelvis. The distal end of the blind dilated hydro-ureter, a constriction similar to a pucker string on a tobacco sac. The vesical orifice of the distal ureter (7a) opens lateral-wards and proximal-ward to that of the proximal ureter, (7).

This anomaly among ureters would present important and practical matters, both as regards ureteral catheterization and surgical intervention. At present, in ureteral surgery, unilateral duplicate distal ureteral orifices are of practical importance, and besides they are not such a *rara avis* because I have seen some 13 during the past two years. However, here I wish to present unilateral duplicate distal ureteral orifices with a caecal or blind ending of one ureter. The following cases are selected to illustrate the subject. The following cases of caecal or blind ending ureter selected from literature, present ample points of interest in the rising field of ureteral surgery.

1. Lechler, 1835, reported a fatal case in a child, where the autopsy demonstrated that the distended blind end of the ureter projected into the vesica urinaria appearing as if there were two bladders. The death was due to gangrene of the distended blind end of the ureter lying within the bladder.

2. In 1856, Lilienfeld, in a Marburg dissertation, reported a case of blind ending ureter in a 65 year old man dying of

typhoid fever. The autopsy presented a complete duplicate ureter on the right side. The proximal ureter crossed the distal one, and made its exit in the bladder to the median side of the distal one. From the blind end arose ureteral dilatation, atrophy of the concerned renal segment and a projection of the blind ureteral end into the bladder lumen adjacent to the caput gallinaginis. No urinary difficulty arose. Doubtless cessation of renal function occurred in intra-uterine or early extra-uterine life from urine pressure in the ureter.

3. Von Heller in 1869, reported the case of a man 79 years old dying of pneumonia. The abdomen was enormously distended. The autopsy demonstrated complete duplicate ureters on the right and partially complete on the left i.e., the two left ureters converged one inch proximal to the bladder. The abdomen was almost entirely filled by a dilated right proximal ureteral cyst—hydro-ureter which possessed numerous sinuities, flexions, and ended blindly in the middle line of the trigone immediately proximal to the orificium urethrae internum. The distal ureter was also a hydro-ureter, apparently ending in the bladder proximal, and external to the blind ending of the proximal ureter. The partially duplicated ureter on the left was negative.

4. Von Osterloh, 1862, reported a new born female with complex duplicate left ureter. The proximal ureter ended blind in the dorsal wall of the bladder in a dilated blind sac. The distal ureter ended normally. It is also reported that the right ureter was dilated where the distal end of the ureter ends blind in the bladder wall, it may become distended and project or invaginate the bladder wall producing the impression of two bladders lying within each other.

5. Karl Weigert in 1877, reported a complete right duplicate ureter. The proximal ureter ended blindly immediately dorsal to the veru montanum in the prostate. The hydro-ureter was as large as an intestine. The proximal ureter crossed dorsal to the distal ureter, and the orifice of the proximal ureter opened distal and median to that of the distal ureter. The subject was a tubercular man, otherwise not remarkable. Weigert also reported a duplicate left ureter without a blind ending.

6. Bostroem reported in 1884 a typical case of a 23 weeks old female infant, in which the autopsy demonstrated complete

bilateral ureteral duplicity, embryonal closure of one ureter with dilatation and invagination or projection of its blind end in the bladder. The urethral exit was dislocated by the pressure of the invaginated blind ureteral end. Extensive bilateral hydro-ureter existed with vesical dilatation and parietal hypertrophy. This child presented strongly distended abdomen immediately after birth. She would make no urine, for a day at a time, then suddenly urinate large quantities. The ureter, the thickness of the thumb, presented elongation, dilatations, sinuosities and flexions. The most logical explanation of the hydro-ureter in this case is: the obstruction is caused by the projection or invagination of the blind ending ureter inducing flexions or angulations, compromising of the ureters, urethra and their exits. The ureter may end in the bladder wall as a blind pouch with no dilation. In such cases the corresponding kidney (single or duplicate) is either atrophic or absent.

7. Dr. E. G. Orthman reported a 28 year old woman from whom during an operation a large cystic tumor was dissected and the proximal end of its pedicle (the ureter) was ligated. The conclusion was the dilated, blind, end of the ureter. The patient recovered.

8. F. Tangl reports a 65 year old woman with a duplicate right ureter which united towards its distal extremity and ended blindly in the ventral vaginal wall. It was mistaken for Gaertner's duct. Left kidney was atrophic. Interstitial nephritis existed in the right kidney. She had a bilocular uterus with one cervix.

9. Kolisko reported a case with complete duplicate right ureter in which the orifice of the proximal ureter opened into the bladder distal to that of the ureteral orifice as a sac-like dilatation which extended distalward into the urethral lumen. The proximal renal segment supplying the proximal ureter was atrophic. The proximal ureter crossed the distal one ending distal to it.

10. Ludwig Geerdtts in 1887 reports the case of a female infant 3 weeks old, having complete unilateral ureteral duplicity with blind ending of the proximal ureter. On the morning of the 8th day after birth a swelling appeared in the vagina. The child was a premature birth, had diarrhea tenesmus, much pain and distended abdomen. A peritonotomy was performed, but

the child died from peritonitis. The autopsy demonstrated complete left ureteral duplicity with hydro-ureter and pyo-ureter in the proximal one. Invagination or projection of the abnormal ending of the proximal ureter in the vesica urinaria and urethra. The ureter was the dimension of the little finger with irregular dilatations the size of goose eggs, and presented pyo-ureter as well as hydro-ureter. The ureter was elongated, increased in diameter with numerous torsions, flexions and sinuositities. It appears the blind end of the proximal ureter was located $\frac{1}{4}$ inch distally and medially to the normally localized ureteral orifice of the left distal ureter. The proximal ureter crossed dorsal to the distal ureter. The blind end of the proximal ureter projecting in the bladder can be sounded in the bladder.

CONCLUSIONS FROM CAECAL OR BLIND ENDING URETER.

1. Blind ending ureters produce hydro-ureters from angulation of its extremity.
2. The hydro-ureter may remain an indefinite time or produce atrophy of the corresponding renal segment.
3. Blind ending dilated ureters tend to invaginate or project in the lumen of the bladder.
4. The projected or invaginated blind end of the hydro-ureter lying within the bladder lumen compromises canalisation, the flow of urine by pressure flexion or angulation of the intramural ureters or urethra.
5. This rule, so far as I am aware, first announced by Weigert obtains in all our cases, that the distal orifice of the proximal ureter its exit in the bladder medianward and chiefly distal to the orifice of the distal ureter. Also the complete duplicate ureters cross each other.
6. The blind end of the hydro-ureter may be sounded from the bladder, hence the ureteral dilatation is chiefly due to valvular or angular obstruction.
7. The fact the blind ending dilated hydro-ureters occur at all ages indicates that they alternately close and open for long periods of time.
8. The blind ending ureter is of practical importance both as to ureteral catheterization and also in operative intervention.
9. In operative intervention I would suggest the ligation of the dilated ureter adjacent to the ureteral pelvis producing

renal atrophy. It is impractical, owing to the renal blood supply, to attempt to extirpate the renal area supplying the blind dilated ureter. The blind end of the ureter projecting into the bladder might be incised, but that would produce an atrium for ureteral infection.

10. No doubt that the obstruction in the blind ending hydro-ureter, since it can generally be sounded from the bladder, is due to the formation of valves between the distal ureter and bladder wall—similar to the vesico-ureteral valve.

Fig. 1. Represents a complete duplicate ureter. The proximal ureter (A) presents small calyces (1) and pelvis (2). The proximal isthmus (3) is marked. There are 2 moderately developed lumbar spindles (4, 4a); a distinct middle isthmus (5); slightly marked pelvic spindle (6); it crosses dorsal to the distal ureter (dotted line), and the vesical orifice has its exit distalward and medianward to that of the proximal one.

The distal ureter (B) dilated, hydro-ureter, caecal or blind presents calyces (1), pelvis (2), and ureter proper dilated into one continuous channel. Proximal ureteral isthmus (3), two lumbar spindles (4, 4a), 5 middle isthmus (5). Pelvic dilatation (6) and (7a) vesical orifice located proximal and lateral to that of the proximal ureter. Abnormal valves are evident. Sketched from a specimen in the Rush Medical Museum by the courtesy of Prof. LaCount.

THE MANAGEMENT OF FEVER IN GENERAL.*

BY AGUSTUS A. ESHNER, M.D., PHILADELPHIA, PA.

In the present state of knowledge fever must be looked upon as a symptom-complex resulting from some derangement of the bodily chemistry, from some disturbance in metabolic equilibrium, which may be brought about in a variety of ways. The causative factors may be generated within the body, or they may be introduced from without, in either event operating through the agency of the nervous system. Thus, fever may result from the retention within the body of the excrementitious products of retrogressive metamorphosis, as in cases of uremia ;

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in consequences of profound changes in the blood, as in cases of anemia : from exposure to intense heat, as in cases of insolation ; and it occurs readily in children—in whom the nervous system is notoriously unstable—on slight provocation, such as gastro-intestinal derangement and even emotional influences. Most commonly, however, fever is due to changes secondary to infective processes—in other words, to the toxic effects of the products of bacterial and cellular activity.

Of the ultimate mechanism of the febrile process nothing definite is known. It is a well-recognized biologic fact that plants and animals are provided with means for adapting themselves to variations in the surrounding temperature, so that they produce or conserve a greater amount of heat when exposed to low and a lesser amount when exposed to high temperatures. Loss of heat in man is counteracted by contraction and favored by dilation of the peripheral bloodvessels. It is reasonably certain that this regulatory power is lodged in the central nervous system, and it is believed that it is under the control of a hypothetical thermotaxic mechanism, which maintains the relations between heat-production and heat-dissipation under varying conditions.

The most distinctive and the most constant feature of the febrile process is elevation of temperature. Although it is customary to attempt a differentiation between fever and pyrexia it is a question whether such a distinction can be successfully made. It is true that occasionally certain conditions ordinarily febrile, such as typhoid fever, typhus fever, septicemia, scarlet fever, are unattended with pyrexia, but under such circumstances it may be that the pyrogenic toxic substances usually produced are not generated or are not absorbed or that their effects are neutralized by antipyrexial substances generated within the body. Nevertheless it is doubtful whether we can recognize a febrile process in the absence of elevation of temperature, or if pyrexia occurs in the absence of fever. Those who endeavour to maintain a distinction between fever and pyrexia take the ground that mere elevation of temperature of nonfebrile origin is due to either increased heat-production or diminished heat-dissipation, or to both, while the elevation of temperature attending the true febrile process is due to an elevation of the heat-regulating

mechanism to a higher level without alteration in the relation between heat-production and heat-dissipation. It has been thought that elevation of temperature in the presence of infectious diseases is a conservative process, perhaps having antibacterial or antitoxic value, but as to the accuracy of such a view the evidence is not conclusive. Other symptoms of the febrile process, such as accelerated action of the heart, increased frequency of respiratory movement, circulatory changes, alterations in secretion, assimilation and metabolism, and in function generally may be due to the same factors as the underlying morbid state or to the pyrexia, or to a combination of the two. The problems therefore, that confront the clinician in the management of a patient exhibiting fever comprise the removal of the causative and underlying factors in so far as this is possible, and the restoration of the metabolic equilibrium, whose derangement is manifested in the various disorders of function. Often little or nothing can be done to fulfill the first indication, as the underlying morbid process is a specific and self-limited one insusceptible of abortion or abridgement, but unless there be some contraindication, some form of elimination or evacuation or attenuation may with advantage be instituted, such as emesis, catharsis, diaphoresis, diuresis, enteroclysis, hypodermoclysis, intravenous transfusion. Through emesis irritants will be removed from the stomach, and infection by way of this organ averted or absorption of poisonous substances from its cavity prevented.

The Lymphatic System and the Tonsils.—Henry L. Swain believes that the practical deduction from his study of this subject is not to give free rein to indiscriminate attempts at removal of tonsils first, second, or third, nor is it to let them alone. The practical point is in operating, to be thorough, and that to remember when it is done, we have some tonsillar tissue left. Immunity is not conferred by operation, only less liability to infection and disease. There is a broad field for progressive work along the lines of strengthening the bulwarks which nature has erected.—*Medical Record*.

SOCIETY PROCEEDINGS.

CLINICAL SOCIETY OF THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

Stated Meeting, held January 4, 1904.

The Vice-President, Dr. D. S. Dougherty, in the Chair.

PRIMARY ENDOTHELIOMA OF THE LUNG AND PLEURA.

Dr. Maurice Packard presented this patient, of whom he gave the following history: Male, aged 24 years, cigarmaker by trade. Father died of endocarditis, sister of apoplexy, brother of diabetes. No history of tuberculosis in the family. The patient gave no history of syphilis or of alcoholism, and claims he was never ill until present time. About five years ago he began to cough, with very little expectoration, but otherwise was perfectly healthy until fifteen months ago, when the cough became more distressing and was accompanied by profuse expectoration. He became very short of breath, especially on exertion, and suffered from pains localised anteriorly on the right side. These pains were increased on deep inspiration. There were no night sweats, nor at that time any hemoptysis nor loss of weight. Although the examination of the sputum was negative, he was sent South with a diagnosis of tuberculosis. As there appeared to be no improvement, he remained but a short time. The symptoms continued about the same, but he noticed that the veins of his chest and abdomen were growing larger, and that when he coughed he brought up considerable blood, sometimes as much as a cupful. His sputum examination was still negative.

Dr. Packard saw him for the first time about two months ago, and his examination developed the following: The man was fairly well nourished, but had peculiar varicosities on the chest and abdomen. His right lung did not expand as well as the left, and there seemed to be a change in the dimension of the thoracic arch. Pectoral fremitus was diminished on the right side, from the second to the fifth intercostal space, and from the sternum to the axillary line. Over this area the percussion note was flat, but over the other portions of the same lung and over the left lung it was almost normal. Vocal fremitus was diminished, and distant bronchial, almost tubular breathing could be heard over this affected region. Over the

other portions of this lung the sounds were normal. The heart, spleen, liver, and abdominal organs were normal. Sputum examination and thoracentesis were negative; the urine normal. One month ago signs similar to the above were found posteriorly in the lower lobe of the right lung.

ERYTHROMELALGIA.

Dr. J. C. Lynch presented this case of Weir Mitchell's disease or erythromelalgia, occurring in a man 51 years of age, who was also the victim of tabes. The patient was single, and an officer in the Navy. He had had the ordinary diseases of childhood. During adolescence he had pneumonia twice and typhoid fever. While on a cruise to the Far East he had Chinese malaria (?) (From his description one would be warranted in presuming that it was lues). Since he was twenty years old and up to the present time he had been free from sickness, except for three attacks of tripper. After the Spanish-American war he noticed that he had difficulty in holding his water (hurried sphincteric action), which was shortly followed by difficulty in walking (ataxic gait) accompanied by sharp-shooting, stabbing pains in the feet and legs (lightening pains). On consulting the ship's surgeon about his difficulty in walking, he was told he was suffering from beginning gangrene of the left foot. He was put to bed and his condition improved. Six months later the other foot became involved. The first two toes were then amputated. After recovery from this operation he retired from the service.

ACUTE THYROIDISM FOLLOWING CURETTAGE.

This case was reported by Dr. Brooks H. Wells. He said that since the time when the Roman matron measured with silken ribbon the throat of the bride before and the day after marriage, to determine by its rounded increase that she had been a pure virgin, the sympathetic relation of the thyroid gland to the pelvic organs has been vaguely known; but hardly more than a decade has passed since we began to appreciate the various facts that will in time lead to an accurate knowledge of the functions and physiology of this and the other ductless glands.

Under certain conditions there occurs in those individuals who have been the subjects of a thyroid tachycardia, a virulent acute toxemia characterised by a well marked group of

symptoms. This toxemia may follow operations upon the thyroid itself, operations upon the pelvic organs, or more rarely, operations upon the breast and other parts of the body, or any marked nervous strain.

The exact mechanism by which the function of the gland is disturbed or excited is not definitely known. The disturbances after operations on the thyroid itself have been attributed to an outpouring of toxic material into the blood, either as the result of the manipulation to which the gland is subjected or from a leakage and absorption from its cut surfaces. These causative factors can be ruled out when the thyroidism follows operations on other parts of the body. In cases similar to the one recorded below it seems certain that the condition is the result of a reflex disturbance of the central nervous centres and the sympathetic centres that control the activity of the thyroid glands, or as has recently been suggested, of the parathyroids.

The condition is often rapidly fatal, death occurring within the first three or four days from cardiac exhaustion. When recovery ensues, the symptoms rapidly or gradually disappear until the individual reaches the status present before the attack.

The following case of acute thyroid poisoning following curettage seemed to possess features of interest which made it worthy of record.

Mrs. X., aged 53 years, had passed the menopause at the usual time, but during the last six months had had repeated small bleeding from the uterus, which was not enlarged, and was freely moveable. She was nervous, thin, and poorly nourished. For many years she had had a slight enlargement of the right lobe of the thyroid, an excitable rapid pulse and slight tremor, but no protrusion of the eyeballs. Auscultation of the chest revealed a few bronchial râles. No other pathological condition was discovered. To exclude the possibility of beginning cancer of the fundus uteri as a cause for the post-climacteric bleeding, a curettage of the uterus was performed under strict asepsis on November 5th, at 10 A.M. The scrapings from the endometrium were examined by Dr. Jeffries, Pathologist at the Polyclinic, who reported that they showed only a moderate grade of endometritis. There was no further symptom, local or general, that could be referred directly to the curettage.

The anesthetic was given by Dr. Bennett and was gas followed by ether. After a few breaths of ether her heart became so rapid that Dr. Bennett considered it wise to change to chloroform, under which the heart beats became slower. From the beginning of the anesthesia to the return to consciousness a little less than half an hour elapsed.

Six hours later the patient was flushed, tremulous, nervous, voluble, but not worried, and with mind clear. Her pulse had risen to 130 and became more rapid on any little excitement. Temperature 100.5 degrees, F. Twenty-four hours after the operation the flush, tremor, nervousness, and volubility were increased; the pulse had risen to 178 and at times was uncountable: her temperature was 99.5 degrees F., there was profuse sweating, a watery diarrhea, marked irritability of the bladder with polyuria, many soft râles all over the chest, and vomiting. The thyroid was perceptibly enlarged, especially on the right side, and presented a quite apparent thrill. There was marked throbbing of the heart and large arteries. Examination of the urine showed a sour odor, reaction neutral, sp.gr. 1012, no albumin, no casts, innumerable colon bacilli, and a few pus cells. These symptoms of an extreme toxemia continued to the end of the first week, then her temperature reached 101.7 degrees F., and the auscultatory symptoms of bronchitis became more marked, though there was little cough and little expectoration. Blood examination at this time showed no leucocytosis and no typhoid reaction.

From the fifteenth to the twenty-fourth day the patient's condition was such that death was expected to occur at any time. The toxic symptoms continued, the tongue became dry and brown, there was extreme weakness and the usual relation between temperature and pulse was reversed so that the most rapid and weak heart action was when the temperature was lowest. The diarrhoea ceased to be troublesome on the twenty-first day, and on the twenty-fourth the patient was able to take small amounts of solid food by mouth. From this time on improvement was steady, but slow, until she reached a condition approximating that before the operation.

Treatment.—At the beginning it was thought that some of the symptoms might be dependent upon an intestinal toxemia, and the patient was given calomel followed by a saline, and

repeated high colonic flushings. The bladder for several days was washed out with a boric acid solution at eight-hour intervals, the washing being followed by the injection and retention of two ounces of a 10 per cent argyrol solution. The diarrhea was finally controlled by tannigen by mouth, ten grains every three to six hours as needed, and starch and deodorized tincture of opium, ten minims, by rectum, every six to eight hours. The insomnia was relieved by the opium and by trional at night, in doses of from twenty grains at first to five at a later period. As it became impossible to make the patient retain food given by mouth, rectal alimentation was employed more or less from the eleventh to the twenty-second day. Solid food in small amounts was given on the twenty-fourth day. The heart action and general condition were not benefitted by any drug; colonic flushing, strychnin, digitalis, belladonna, suprarenalin, alcohol, all seemed to do more harm than good.

Dr. Robert C. Myles opened the discussion of this case. He said that one of the peculiar characteristics of exophthalmic goitre is the diminished electrical resistance. If some one would experiment with these cases in order to find out, if possible, what alkaloid is discharged into the system, and its exact relation to the thyroid, the speaker thought, these cases could be treated more successfully.

LEPROSY.

Dr. F. Dillingham presented a patient, male, aged 58 years, who was born in America, and has lived here, with the exception of one year spent in Mexico, during his entire lifetime. Eight or nine years ago a corn appeared on his right foot. It began to burn, and in a short time a perforated ulcer developed. He had the joint excised, and two years afterwards the second joint was also treated in this manner. Two years later a second ulcer appeared on the other side of the same toe. There are now two perforating ulcers present. This was about all the history the patient could give.

The speaker said that the diagnosis can easily be made from the typical picture presented and by exclusion of any other condition because of the lack of essential conditions. The brownish patches here and there, and the peculiar brownish color and scaling appearance of the limb were characteristic of

leprosy. There were more or less atrophy of the foot and also of the hand, but very little loss of sensation. He said there were three types of leprosy, and gave the differential symptoms minutely. The question of contagion was interesting in these cases. In some countries leprosy undoubtedly is contagious, but in his opinion, this is not true in our climate. There are several cases in this city all the time, and no case has been reported that has developed as the result of contact with another patient suffering from the same condition. He once saw a patient in whose case he made a diagnosis of leprosy, and she informed him that her husband had suffered from the same condition before it developed in her. In countries where leprosy is prevalent, people who have proper food and proper hygienic surroundings very rarely contract the disease. Some authorities claim that it is infectious, some that it can be conveyed only by direct contact, and some that it is a concomitant of yellow fever and malaria. Experiments have been made by having lepers breathe into a certain receptacle, and colonies of bacteria have been grown from the atmosphere into which they breathed, showing that the mucous membrane of the mouth may be the source of infection. Inoculation, as a rule, has been negative. The speaker succeeded some years ago in inoculating some persons with leprosy, but there was some doubt about its being a leprosy family, so that experiment proved nothing. Some guinea-pigs were inoculated with tuberculous nodules, and eight months later bacilli were found in the kidney, spleen, and liver.

The duration of the disease varies according to the form. Some patients live twenty years after the symptoms appear. The patient before the Society had suffered from this condition for about nine years, and except that it was rather inconvenient for him to get about, he was not incapacitated for work.

CAST OF A BRONCHIAL TREE.

Dr. F. M. Jeffries presented a cast of a bronchial tree. He said that the cast was from a patient suffering from fibrous or plastic bronchitis. It showed the ramifications of the smaller bronchial tubes. The speaker said that it was the first specimen of the kind he had seen in a laboratory experience of twelve years, and for this reason he thought it worthy of note.

A NEW METHOD OF TREATMENT FOR FRACTURE OF
THE NECK OF THE FEMUR.

The paper of the evening was read by Dr. Royal Whitman. He called attention to the fact that it was generally admitted that the results of treatment of fracture of the neck of the femur are very unsatisfactory. These results are to be ascribed, not so much to the age of the patient or to the severity of the injury, as to the faulty conception of treatment and its perfunctory application. At present it is taught that no attempt should be made to correct the deformity of an impacted fracture, a deformity which is essentially a traumatic coxa vara; while the means employed to appose the fragments and to hold them in position, if the fracture is complete, are quite ineffectual, as demonstrated by the fact that shortening is almost always present when the treatment is concluded. He said that fracture of the neck of the femur is not uncommon in childhood and in vigorous adult life, but as it is often incomplete, it is usually classed as contusion. These cases are unrepresented in Hospital statistics.

The treatment which he had already described as applicable in childhood (*Annals of Surgery*, November, 1902), he would, on further experience, now urge as one of routine in all favorable cases. In principle, it is a method of replacing the depressed neck, if the fracture is incomplete or impacted, and of apposing and retaining the fragments in approximate apposition if it is complete. If the fracture is impacted, the patient having been anesthetized, the extended limb should, under traction, be slowly abducted. As in every instance in which depression of the neck is present, abduction would be checked when the neck comes into contact with the upper border of the acetabulum, further forcible deduction by means of the leverage of the extended limb on the fulcrum of the acetabulum would disengage the impaction and elevate the neck. At the limit of normal abduction a long plaster spica bandage should be applied. If the fracture is complete, the shortening should be reduced by traction and counter traction. The limb should then be abducted, and by downward pressure on the trochanter, the outer fragment may, if of sufficient length, be pushed beneath the rim of the acetabulum. Abduction should then be increased until the trochanter is brought into

contact with the side of the pelvis so that upward displacement is impossible. In this attitude it is evident that muscular contraction becomes powerless to induce deformity, while the firm support of the plaster bandage permits necessary movement without danger of displacement. The details of the treatment and the after-treatment were described and the modifications that might be necessary to meet varying indications. In closing, the reader again called attention to the large number of patients, still youthful or in vigorous old age, who, because of failure of diagnosis and inefficient treatment, were in great degree disabled by this injury. He said that the limitations of weakness and old age so often urged as an excuse for the present ineffective and perfunctory treatment should not be extended to this class, but that one should attempt to apply here the principles that are admitted being essential to the successful treatment of fracture in other situations.

Dr. J. A. Bodine opened the discussion of this paper. He said that it was particularly interesting to him because he had control of practically the largest fracture service in the country at St. John's Hospital, Long Island City. Some years ago he had called to see a patient who, as far as he could make out, had sustained an injury to the patella ligament, and there was relaxation between the patella and its insertion. He had never been told that fracture of the neck of the femur was a condition of young life, and sent the patient to Dr. Whitman, who made the diagnosis. Most of the patients were forty, fifty, and even sixty years of age, who were included in the speaker's service, and were thin and emaciated for the most part, and an anatomical cure was more than could be hoped for. If the patients could get about with the limb supported by a high shoe, the surgeon had to be content, but in future, the speaker would be glad to try Dr. Whitman's method. About two years ago Dr. Maxwell reported several cases in which he put on twenty to thirty pounds pressure to reduce the shortening, and in addition lateral extension of some ten pounds, as he claimed that in case the neck of the bone was pulled down, a better position resulted. He showed four post-mortem specimens secured from patients who died some years after this method was applied, which showed almost perfect union. Dr. Whitman claimed these ends could be brought into apposition. His

method possessed a great advantage over others. But in young people why not use direct operative interference? The surgeon can cut down, certainly, on the great trochanter.

Dr. Alexander Lyle said that he was surprised that the writer of the paper advocated the breaking up of an impacted fracture. He thought that the age and general physical condition of the patient should be taken into consideration before adopting it. He was sure that if the general condition was unfavorable, it would not be justifiable to release the impaction. He had noticed that fractures of the neck, near the trochanter, are almost invariably impacted, and those near the head of the femur are not impacted, which might be an important point in diagnosis.

In reply to Dr. Bodine, Dr. Whitman said that twenty-six cases of fracture of the neck of the femur in childhood had come under his observation, and that in a single year he had seen five cases in young adults in not one of which had the diagnosis been made. He was not ready to admit that because a person was sixty years of age, treatment was useless. Direct operative intervention is, of course, a treatment of last resort, that may be applied only under favorable conditions. It, however, might be the treatment of selection for partial epiphyseal separation in young subjects.

Cocaine Habit Among Negroes—At the annual Hampton Negro Conference, which began its sessions July 15, the question of the growth of the cocaine habit among negroes was discussed by Dr. J. W. Prather. After a report on the diseases to which the negro is liable, he called attention to the alarming growth of the cocaine habit, and pointed out the fact that upwards of 200,000 negroes are addicted to the cocaine habit or the use of other narcotics. In a recent number of the *Medical Press* reference is made to the increasing spread of the cocaine habit, and its prevalence among negroes is commented upon. —*Boston Med. & Sur. Jour.*

CORRESPONDENCE.

THE TRANSIT OF BEHRING STRAIT.

NOTE:

New York, Feb. 5, 1904.

Sir: I send you some opinions called forth by my article "Origin of Quaternary Man in the Western Hemisphere," (ST. LOUIS MEDICAL AND SURGICAL JOURNAL, Nov. 1903), written by W. Cochran, a Supreme Court Stenographer for 33 years.

A. S. A.

MY DEAR DR. ASHMEAD:

My proposition is that land communication between the Eastern and Western Hemispheres by way of an Atlantis, the sunken continent of tradition, does not preclude the possibility, nor the probability, of a land transit from Asia to America by way of Behring Strait, the remnants of whose people are now to be found in our Arctic regions, and whose arrival upon our hemisphere ante-dated a migration from Europe.

In a recent lecture. Sverdrup states that he discovered, near Behring Strait, in mound-like elevations which attracted his attention, animal bones and implements of the chase and of the household; and that these traces extended to Lancaster Sound; and he believes that when the ice in some former period of its history afforded favorable conditions the ancestors of the present Arctic Highlanders and Esquimaux left the inhospitable shores of the present Siberia and betook themselves to the more congenial region of Ellesmere Land and Smith's Sound.

These people would naturally remain among the conditions to which they had been subject from time immemorial, having need to abide where were accessible creatures who furnished them with food, clothing and weapons with which to sustain themselves against their severe environment. It is true that about one thousand years ago a large colony of Norsemen went to Iceland, and to Greenland, and remained there. That may account for the antipathy which Mr. Peary observed on the part of the Arctic Highlanders towards the people of the more southerly portion of Greenland, it being well known that the light-colored races antagonize all with whom they come in contact. Their intrusion and absorption into the people below may be presumed to have created resentment and have established an aversion which has become traditional. But, this being the case, it goes, so far as it goes at all, to establish the proposi-

tion that a people were there who were hostile to the arrival of another type of man.

I understand that the Ice Cap had its extreme feet at latitude 40, Long Island being one of the terminal moraines; and that it receded rapidly to the northwest, reaching the Pacific Coast at about Vancouver—that it was not uniformly down to the 40th parallel.

Professor Geike is quoted as saying that the glacial period influenced contemporaneously the climate of Europe and North America; greater in North America than in Europe. This makes no mention of Asia—excludes it from the superincumbent ice mass (my reading has not shown any ice cap in Asia), and will go to reinforce an inference that as it approached Asia from the longitude of New York it began to leave the 40th parallel of latitude, and thus go to confirm the theory of a more or less rapid recession toward Behring Strait. Therefore, in the orderly course of the retreat of the ice, access to our Arctic Coast regions would have been sooner afforded to the people of Asia than to a Ligurian migration by way of the Atlantis.

In this connection, I will state that Dr. Brinton's language, it seems to me, must by its phraseology (page 7, *Origin of Q. Man in W. Hem.*) be deemed not to include Alaska, the Arctic Archipelago, the western coast of Greenland, nor, for that matter, the tribes around Hudson's Bay and between there and the Arctic Coast.

For further evidence of the rapid recession of the line of the ice cap, I may say that I have not observed any trace of its presence on the Sierra Nevada mountains, nor have I seen any evidence of its presence over the fertile foot-hills of that range, nor in the valleys north of San Francisco. Certainly none south. The rich valleys appear to have been long under a quiescent inland sea, which distributed the silt which came down; while the foot-hills showed such evidence as would be left by turbulent and heavy running mountain torrents in the moving of pebbles and small boulders. It is true that I have never been particular to notice the State geologically. But I do know that the Sierra Nevadas are rugged, sharp, granitic rock, showing no rounding off and striæ, which is the peculiar feature of all fixed rocks over which the cap has moved. Nor have I seen

stræ anywhere there, in latitude 42, San Francisco being at latitude 38. Had there been no recession of the line of the ice cap from latitude 40, which it reached here, there would have been, by all fair reasoning, evidence of its presence in the latitude of the Sierra Nevadas just mentioned.

If the conditions of cold were not so severe in Europe as in America, why should a Ligurian migration press along the foot of the ice cap on this hemisphere, for it would seem to be, upon the acknowledged theory of warmer conditions in Europe, an unavoidable presumption that there was no ice cap in the neighborhood of the shores of the Mediterranean, latitude 45, from which region the Ligurians came.

If the Ligurians would not seek the frigid precincts of the western hemisphere for the reason that they would thus encounter an environment more severe than that to which they had been accustomed, so also the people of the far north would not leave the whale, the walrus and the soft-feathered birds for a region with which they were not acquainted, and where they would have to undergo the distress of adapting themselves to a new surrounding. Man always travels along the line of least resistance, unless moved by a higher impulse than that of supplying his physical wants; and when located either north or south of the temperate zones does not carry away and impart his institutions. Therefore there would be found no trace of Asiatic transfer in even the most extreme north of the Ligurian migration.

Man has been upon this globe far longer than the world of science is prepared now to concede. The fierce North American Indian, unknown as to his origin, has destroyed all the people that he came upon.

But it has never been claimed that he reached the Arctic Coast, so far as I know.

It is not unreasonable to bear in mind the almond eyes of the Esquimaux, and of the Digger Indians of California, now about extinct, when one considers the great extent of territory that separated their habitat from the regions that would be reached by the Ligurian migration from Europe, and the ranges of mountains which cut off the very people under consideration, the Arctic Asiatics, from wandering from their solid ice, which would afford them better subsistence and firmer footing than would the watery and mushy territory below.

In view of all this, it would seem that the supposition that some men (perhaps the original man, as far as this hemisphere is concerned) came from Asia cannot be precluded.

If the contention is simply that the culture of ancient Mexico, as well as that of ancient Peru, could not have come by way of Behring Strait, it may be readily granted.

ATLANTIS.

If the foregoing reasonings and conclusions are correctly based and given, the theory that search for the antecedents of present man in the north temperate and south temperate zones should be made in the La Plata is supported.

While comparison of flora and fauna are deemed by scientists to be of the highest value in determining the former relativity towards each other of now widely separated regions, a glance at the map will show a wonderfully strong suggestion that Africa and South America were rent apart, Cape St. Roque apparently dragged from what is now the Gulf of Guinea, and the overhanging western portion of the continent having been taken from the great indentation in the shore line of the United States.

May not this represent the place of the lost Atlantis?

Thus Europe and America may well be deemed to have been nearer to each other than they are now, or, indeed, in contact. And if in these shore lines is contained a suggestion of contact, how much stronger is the suggestion at Behring Strait?

Thus it is that in the La Plata is to be expected the remains of the earliest people that can now be traced leading up to our civilization.

But it does not preclude the possibility and the probability that the characteristic human life at Smith's Sound had for its forbears a migration across Behring Strait.

Under the theory of the procession of the equinoxes, and the consequent approach of another ice cap, it would seem that all the knowledge of the present day, and all that subsequently to be acquired, is to be lost in the great slow crush and the later hurry and scurry of the elements at the next ice age.

Very truly yours,

ALBERT E. COCHRAN.

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EDITORIAL.

PALATABLE, YET EFFICIENT.

To him who has devoted any time to the subject, it is very apparent that, in the last fifty years, pharmacy has made vast strides. These have been not only in the direction of the introduction of many valuable synthetic products, but also in the way of making many of the older Galenical preparations agreeable to the palate of the patient, eliminating much of that which was nauseous and practically inert. Pleasant remedial agents is the shibboleth of the modern pharmacist, and the constant effort has been bent in this direction in possibly too strenuous a manner, and this possible fact has dawned upon the minds of some when they advertise their preparations as being palatable, yet efficient. It was an old trick with the ordinary druggist to employ aromatics to disguise the odor and taste of castor oil that was to be administered to children, as it was

later on to render less nauseating the potions to be taken by women. It is a common belief to this day that medicine is not palatable, no matter under what form it is produced. An equally wrong idea is that the worse a medicine tastes the more efficient it is.

These erroneous ideas are probably what gave its origin to the expression "palatable yet efficient." Some people do not want to take sweets or lemonade, and insist upon a remedy possessing a certain "tang." These are the ones who are rapidly disillusioned when they take a neat-looking gelatine or sugar-coated pill and chew it to see if it is a jujube or confection, and suddenly taste the bitter of strychnine or the nauseating taste of phosphorus. They then come to realize the fact that our modern manufacturers of pharmaceutical preparations have made advances commensurate with those in other arts. Yet, whilst many advances have been made in this direction, it still remains a fact that there are efficient remedies which cannot be made palatable if they are to retain their efficiency. No matter what is combined with them, provided that the ingredients are not antagonistic, that same bad taste will persist. On the other hand, it is often necessary to add a synergistic, which, whilst adding to the efficiency of the remedy, will impart a most disagreeable odor or taste.

The physician prescribes his medicines to produce certain effects, and he may rightfully insist that he cannot make his remedies suit the idiosyncrasies of his patients. He cannot adapt them to all the follies of those who need remedies. The cases are not few in which patients have declared that powders of sugar of milk burned and produced intense gastric pain. Some patients have complained that pills made of bread crumbs were intensely bitter, and so on *ad nauseum*. The only way to do is to prescribe remedies in as pleasant a form as is compatible with their efficiency, and to endeavor to disabuse the minds of patients of many of their preconceived ideas. It is certainly a difficult task to make reasonable beings out of such as are ill and querulous, but a little patience and kindness combined with soothing ways will accomplish much. And, after all, that is the true function of the true physician in addition to prescribing pills and potions and that "nasty stuff" called medicine.

BOOK REVIEWS.

International Clinics. A Quarterly of Illustrated Clinical Lectures, and especially prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by A. O. J. KELLY, A.M., M.D., with the Collaboration of WM. OSLER, M.D., JOHN H. MUSSER, M.D., J. B. MURPHY, M.D., JAS. STEWART, M.D., A. MCPHEDRAN, M.D., THOS. M. ROTCH, M.D., JOHN G. CLARK, M.D., JAMES J. WALSH, M.D., J. W. BALLANTYNE, M.D., JOHN HAROLD, M.D., EDMUND LANDOLT, M.D., RICHARD KRETZ, A.M. With Regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Liepsic, Brussels, and Carlsbad. Vol. IV., Thirteenth Series. 1904. 8vo. pp. 321. Illustrated. [Philadelphia: J. B. Lippincott Co. 1903. Price, \$2.00 net.

This volume makes a fitting close for the thirteenth series of this remarkable publication, which made such a successful beginning, and has never lost any of the excellence with which it began, but rather added to it so that each successive volume has become a marked increment in the production of such a successful whole. We have had occasion to commend the publication as an entire product in many instances, and the value of its contributions in each successive issue has been pointed out to our readers. It seems to be merely a repetition of what has been already said, to note that the present volume, when examined critically, is superior to its predecessor, and yet it is nothing but a mere statement of fact. The latest advances and observations of the present masters in medicine and surgery are given to us in especially prepared articles, and clinical lectures presented in such a manner as to be easily understood by the readers. In fact, some of the most abstruse problems in pathology are so presented that a mere tyro almost can understand them.

This volume opens with a very carefully prepared article on the Clinical Features and Treatment of Ulcer of the Stomach, by Dr. James Tyson. The Treatment of Pneumococcic Infection of the Lung or Croupous Pneumonia forms the subject of Dr. John H. Musser's paper, and the Treatment of Chronic Bronchitis is that of the contribution of Dr. Thomas A. Clayton, Dr. Louis Jullien, the great syphilologist of Paris, writes a full and thorough article on Subcutaneous Injections of Mercury for Syphilis. In the Department of Medicine are to be particularly

noted; *Some Clinical Aspects of Diseases of the Kidneys* by Dr. Henry Baird Farill. The Clinical Manifestations and Treatment of Chronic Nephritis by Dr. Louis Fangeres Bishop; Angioneurotic Edema, its Clinical Varieties, with Typical Cases by Mr. James Burnet, this being a very thorough and well-written study; Syphilitic Ateritis by Dr Robert B. Preble, which is both valuable and instructive. There are other excellent papers. In the Department of Surgery the first and most marked article is on a Case of Interilis-abdominal Amputation for Sarcoma of the Ilium, and a Synopsis of previously reported cases by Drs. William W. Keen and J. Chalmers De Costa. A Surgical Clinical Clinic embracing a number of cases by Dr. Nicholas Senn form an interesting contribution; The Radical Cure of Prostatic Hypertrophy is contributed by Dr. J. Albarran, and in this he gives us his opinion of, and experience in different methods; Stricture of the Esophagus by Dr. Martin F. Coomes is a valuable contribution to the subject; An article which is very timely is that by Messrs. William H. Battle and E. M. Corner, in the Differential Diagnosis of Acute Abdominal Conditions which require Surgical Treatment. Dr. William C. Dugan is represented by a clinical lecture on several surgical cases.

In Gynecology and Obstetrics there are four papers, the principal ones being Hysterectomy in Acute Puerperal Infection by Dr. A. C. Pinard, and Gonorrheal Vulvitis, its Dangers and Treatment by Dr. Louis Frank. Neurology is represented by Hemiplegia in the Young and in the Old by Dr. Alexander James and a Clinical Lecture on some cases by Dr. Daniel R. Brewer. Dr. John Lincoln Porter is represented in the department of Orthopedics by a clinical lecture on congenital dislocation of the hip; congenital club-foot; etc. Ophthalmology is represented by two papers: one in the Preparation of the Patient for Cataract Extraction by Dr. Casey A. Wood, and the other one on The Diagnosis and Treatment of Acute Glaucoma by Dr. E. Valude. The concluding article in Pathology is on The Present State of our Knowledge of Immunity by Dr. Joseph McFarland. He gives a very good and thorough exposé of Ehrlich's theory.

The articles are well illustrated in this volume, and all the articles are full of interest and very useful. We have been more than ordinarily pleased with a perusal of its contents, and can recommend it to our readers.

Social Diseases and Marriage. Social Prophylaxis. By PRINCE A. MORROW, A.M., M.D. 8vo. pp. 390. [New York and Philadelphia: Lea Brothers & Co. 1904. Price, \$3.00 net.

This is the first book in English devoted to the subject of which it treats, and no better teacher could have been chosen

for this work than the writer of the excellent monograph before us. He has fearlessly attacked this subject in medical deontology in a manner which shows him to be a complete master of it, and he has succeeded in what promises to be a classical reference book for many years to come. It will particularly appeal to all those who have had any considerable experience in the treatment of venereal diseases in both private and hospital practice. The subject is approached from all sides, and all its possible aspects are considered by one who has proved himself a thorough master of that concerning which he writes both from a scientific, and a legal and social point of view. He has here laid bare one of the festering sores of society, and whilst advising the physician to do all in his power to repress these diseases, and do his utmost to prevent the infecting and propagating them, he is equally severe in insisting upon the propriety of not divulging any professional secret. In fact, he reviews the questions presented before and after marriage in relation to venereal diseases, and gives advice of the best sort, not forgetting directions of such value that a layman as well as a physician may profit by it. The author treats his subject from a very logical point of view, and whilst he discusses all the various methods which have been tried to regulate prostitution, he justly regards them as inadequate, and with equal justice looks upon the suppression of this evil as impossible. What he does consider not only possible but feasible is the repression of the marriage of two individuals one or both of which are syphilitic. He goes on to show that the off-spring of heredo-syphilitics offer some inadequates dependent upon their procreators. He thus roughly goes over the ground of syphilis and marriage, which was treated of in such a masterly way by Fournier, and which he translated from the French. A subject which he considers fully and at length, and to which no great attention has been paid until of late years is that of gonorrhea and marriage. He very justly points out how women suffer mostly from this as instanced by the large number of pelvic diseases with which they are affected by the gonorrhea of their husbands. He very justly points out the dangers which are brought on by the gonococcus of Neisser, and the greater attention this has brought to its influence, and the ravages which it may cause. He, in no sense, exaggerates as may be attested to by any one who has had any clinical or pathological experience in connection with gonorrhea. We have no doubt that the day is not very far distant when that disease will be classed with the infectious systemic diseases, and it will be regarded as equal to syphilis in seriousness if not more so. Gonorrheics will find it a more difficult task to enter the marital state than syphilitics when the disease is better understood.

The author keeping in mind the unlawful relations between the sexes which have come to be known as the "social evil," has adopted the term "social diseases" to indicate the infections most often acquired in that manner, and he might, with equal justice have characterized as the "Social blot," the marriage of a tainted individual to one clean in every respect. We have no patience with individuals so devoid of honor, decency, or probity as to inflict such vile diseases upon innocent victims through legitimate marital relations, and involving in the consequences thus entailed not only the health, but the peace, honor, and happiness of the entire family. The consequences do not cease here, but continue for generations with the final prospect of an ultimate depopulation of a serious character.

Every physician, and for the matter of that, thoughtful adult should read, and not only read but study the book before us. No student of sociology can afford to let its lessons pass by untested, and above all no physician has a right not to get well acquainted with its teachings, and heed them as he is in duty obliged to do. We have not seen a better book on the subject in French or German than the one before us, and it will, without doubt, be received with much favor abroad as it certainly deserves to be.

O-D.

A Manual of General Pathology. For Students. By SIDNEY MARTIN, M.D., F.R.S., F.R.C.P. 8vo. pp. 502. With numerous Woodcuts from micro-photographs and other Illustrations including many in Colors. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$4.00 net.

This is a work for which a demand has certainly existed for quite some time: for, it is a generally conceded fact that nearly all the works on pathology which we possess are translations from the German for the most part, and although there can be no question that they are of a high order of excellence, it must be conceded that there is much satisfaction in reading and studying a thorough work which has been originally written in English. The author of the book before us is known as the Professor of Pathology at University College, London, and the volume presented to us here is based on the lectures which he has delivered during the past five or six years. It is for this reason that it is peculiarly adapted to the wants and needs of students of medicine. And, it may be added with equal truthfulness that its value will be found equally as great by practitioners of medicine who have grown rusty on this subject.

The author begins by telling us that general pathology is a study of the processes of disease, and this may be regarded as the plan upon which the entire subject is handled. A glance

at the table of contents of this work will demonstrate its thoroughness and the complete manner in which the author handles his subject. Chapter 1. is devoted to inflammation including phagocytosis. In Chapter 2. we are given the subject of pyrexia. The next four chapters are concerned with infection, and this is treated of in a very complete and systematic manner. Immunity is taken up, and in this we find the latest views on the subject ventilated, and Ehrlich's Theory is very well explained. In Chapter 7. we are given the degeneration and regeneration of cells and tissues. In the two succeeding chapters changes in the circulation are taken up and considered. The changes in respiration in diseases are noted in Chapter 10. Changes in the blood in disease occupy three chapters, and are certainly very interesting as this subject is now an important one in connection with the diagnosis and treatment of many diseases. Hemorrhage and pigmentation, the effects of disease of the liver; the effects of disease of the kidneys; and the effect of disease of the ductless glands of the body occupy successive chapters, and in the last the author speaks of the action of thyroid extract and that of suprarenal extract, Chapter 18 is devoted to changes in metabolism, a subject which is attracting much attention on the part of the more advanced clinicians. The concluding chapter on changes in the nervous system in disease will be read by all with a great deal of interest. The author is certainly in favor of the neuron theory, if we are to judge from his description of neurons and their nutrition.

This book has been prepared and written with the utmost care, and there is no doubt of its reliability when we take into consideration the well known conservatism which all British authors manifest in their printed writings. The author of this work in pathology is not hesitating, but he very rightfully considers it but proper to insist only on those things which are known and successfully demonstrated. He does not advance a number of theories and hypotheses which it would be difficult to successfully sustain, and it is this very mild form of conservatism which will recommend it to all thinking medical men.

The publishers have certainly made a handsome volume of this work. The print and paper are exceptionally good, and the illustrations, 127 in number, are very well drawn. Many of these are in colors, thus adding to their value as demonstrative factors in elucidating the text. Both teachers and students of general pathology will find this work a useful one for study as well as a valuable reference book to keep in their libraries. We can heartily commend it to the friendly consideration of all medical men.

Diseases of the Nervous System. A Text-Book for Students and Practitioners of Medicine. By H. OPPENHEIM, M.D., Translated and Edited by EDWARD E. MAYER, A.M., M.D. Second American Edition, Revised and Enlarged. 8vo. pp. 953. With Three Hundred and Forty-Three Illustrations. [Philadelphia and London: J. B. Lippincott Company. 1904. Price, cloth, \$5.00 net.

The subject of Neurology has certainly been constantly receiving additions like all departments of medicine, and it becomes absolutely necessary from time to time to revise the best written and most thorough works. The present one, since its very appearance, has been looked up to as both reliable and authoritative. Its author, the well known professor of the Berlin University and former assistant of Westphal has very wisely deemed it expedient to revise his work twice, and the book before us, the second American edition translated from the third German has been very well edited by its translator himself, a well known neurologist of Pittsburg. We can note throughout this edition a number of modifications and of additions all of which go to render the book more complete as well as more exact. In fact, it almost seems like an entirely new work, and those who do not possess the first edition cannot go far wrong by obtaining this one, as it is particularly adapted to those for whom it has been intended and written. The author knows well what the needs of others in neurology are and he has supplied them.

The method to which the author of this work has adhered is to lay particular stress on diagnosis and prognosis, therapeutics entering for its full share of consideration. Naturally pathology comes in for a full share of consideration, and the microscopic pictures of the various forms of degeneration as well as of the different pathologic changes are numerous and original. Not alone this, but the illustrations of the numerous nervous diseases are sufficient in number to give the student an adequate idea of the subject on which the author writes. This book in itself comprises a full course of instruction of no mean value. In our opinion the book is well worthy of adoption as a text-book by teachers of the subject even if in no other capacity than as a supplementary one to cover the subject with a greater fullness and detail than we find in the ordinary ones. As a guide to a thorough course of lectures it is certainly unexcelled. It is hardly necessary to enter into details in a review of this volume, and it may be sufficient to note that, in the first place, it is divided into two parts. The first or General Part is devoted to methods of examination, general symptomatology, and objective examination. In the examination that of the mental state is entered upon as an aid in formulating a diagnosis. The second or Special Part is given up to a consideration of the

different diseases of the central and axial systems. Although the author does not completely discard the neuron theory looking upon it as necessary for certain investigations, he is not enthusiastic over it and his support of it is inclined to be rather conservative.

As we have already stated above the work before us is one of a superior character, and it will be read with avidity by all neurologists and should be carefully studied by students and practitioners of medicine. The publishers have made a handsome book of it, printed on good paper in a superior manner, and with illustrations of the best execution. We heartily commend it to all those in need of a work on diseases of the nervous system.

Transactions of the American Dermatological Association, at its Twenty-Seventh Annual Meeting held at Washington, D.C., May 12, 13, & 14, 1903, in connection with the Sixth Triennial Session of the Congress of American Physicians and Surgeons. Official Report of the Proceedings by CHARLES J. WHITE, M.D., Secretary. 8vo. pp. 213. Illustrated. [New York: The Grafton Press. 1904.

This is beyond all doubt the best volume of Transactions issued up to the present time by the American Dermatological Association. The work now done by the several members is of a better quality and higher standard now than it was in former years. This is clearly evidenced by the volume before us, which is certainly a valuable one for all those who are interested in cutaneous medicine and surgery. The papers all show unusual care as well as study in their preparation, and the questions of to-day in dermatology are taken up and discussed in a very clear and thorough manner. Including the President's address by Dr. John T. Bowen, the volume contains eighteen papers, the majority of which are very well illustrated by well-executed half-tone engravings. Throughout we observe an evidence of the pains taken by the members to present papers which will compare with the best produced in their chosen field of medicine, and an examination of the present volume of Transactions will show that they have acquitted themselves very well of their self-imposed task.

As usual the combined returns of the members are, in the highest degree interesting and contain much in the way of statistical information on the number of cases of skin diseases and their comparative frequency. The total of the cases is steadily growing larger and larger year by year an evidence of the fact that the public in general is seeking aid for skin diseases from those who are particularly qualified to render it. As a further evidence of the greater interest taken in the subject may be mentioned its fast growing literature which begins to vie in its

proportions with that of any other special branch of medical study.

We cannot very well enter into an analysis of the contents of the volume of Transactions before us. All the papers are well printed, and the illustrations are produced in a very good manner on plate paper. It may be only necessary to state that the volume is reprinted from the pages of the *Journal of Cutaneous Diseases including Syphilis*, which is the official organ of the American Dermatological Association to make our readers understand the extra paper and press work which characterize the volume. Taken altogether, it is a very creditable volume, and we are certain that it will do much in the way of gaining the high opinion of European dermatologists in regard to the thoroughly high class of work done on this side of the Atlantic. The only cause for regret that we have is, that many of our younger men do not take up the study of cutaneous medicine and surgery, as we are certain that they would find this a most fertile field to cultivate and equally as fascinating as those they prefer.

Much of the credit of getting out the volume is due to Dr. White, the Secretary of the Association and editor of the Transactions. He has certainly well performed his task, and in a manner reflecting credit upon the Association. The Grafton Press which has issued the volume has done so in the best style of the printer's art, and has succeeded in producing a volume, every possessor of which will give it a prominent place on his book-shelves.

The Blues (Splanchnic Neurasthenia). Causes and Cure. By ALBERT ABRAMS, A.M., M.D. (Heidelberg), F.R.M.S. 12mo, pp. 240. Illustrated. [New York: E. B. Treat & Company. 1904. Price, \$1.50.]

We have all had occasion to meet individuals who complained of having the blues. Some will state that they feel "as blue as indigo," and it is more frequently observed in young females, although the reviewer has observed it in well built, muscular males in the thirties who felt depressed at an unexpected financial disaster or some catastrophe of a similar character. The non-medical public is very apt to laugh at such a condition, little knowing, or suspecting less, that it is a diseased condition. Those who have studied the trouble are ready to note the derangement which exists principally in the nervous system. Those who are healthy in mind and in body cannot either understand or appreciate the true condition of affairs which is, in reality, a serious one. Some medical men who will not give the condition that amount of attention necessary to its proper elucidation will call it vapors, hysteria or a beginning of melancholia, all of which are incorrect. The whole

subject is one fraught with great interest and now that such a rapid pace has been set by modern civilization, a larger number of individuals is affected by this condition than ever before, the result being that every practicing physician encounters such in his practice and should certainly know what to do to relieve such patients as apply to him for treatment. Neurologists are certainly acquainted with the trouble but all practitioners of medicine should also possess an adequate knowledge of it.

In writing the book before us its author has done the medical profession a real service. He has not only thoroughly considered the conditions from every point of view but he has also given that most valuable part, its treatment. He begins by telling us what "the blues" is medically speaking. An attack of the blues is an attack of acute neurasthenia or an aperiodic aggravation of chronic nervousness. Heredity and environment which have much to do with the causation of the trouble may be effectually fought by personal effort. Among the primary causes are sexual neurasthenia, uric acid neurasthenia, and others such as worry, the abuse of alcohol. It must be admitted that the trouble is essentially splanchnic neurasthenia. In discussing the subject, the author gives us the symptoms and *pari passu* we find the only rational treatment outlined. He does not advocate drugs or such inefficient measures but gets at the root of the disturbance by means of physiologic methods. There is no doubt that this is the proper course to pursue and the present modern tendency is to avoid drug medication and resort to purely physiologic therapeutics. This book is one worthy of close study by physicians, who will find much in it to their advantage and that of their patients.

The publisher has made a nice volume of this little monograph and has very appropriately bound it in blue. We bespeak a successful sale for it, as it certainly deserves it.

The Self-Cure of Consumption without Medicine. With a Chapter on the Prevention of Consumption and other Diseases. By CHAS. W. STANLEY DAVIS, M.D., Ph.D. 12mo., pp. 176. [New York: E. B. Treat & Co. 1904. Price, 75 cents.

This small book is one which is especially adapted to the non-medical reading public, as it does not deal with the technicalities of medicine. It is written in a very clear manner such as may be easily understood by any person of average intelligence. The author begins by a general consideration of tuberculosis of the lungs, and follows with some physiological facts concerning nutrition, assimilation, and the proper oxygenation of the blood. He shows the functions of exercise and pure air in their role of making tissues better in quality and non-resistant to outside influences. This very naturally leads

to the main topic, that of self-cure in consumption. Naturally the rule of climate in the effects it exercises in the production of a recovery from pulmonary tuberculosis causes the appearance of a short chapter on the different localities best adapted to consumptives and to their improvement. There are several appendixes given which severally deal at greater length upon some of the ideas advanced in the body of the book. The author is unalterably opposed to the use of alcoholic stimulants in the treatment of consumption. Whilst many members of the medical profession will not agree in this view, we are certain that all will be in accord with the author when he says, "In many patent medicines which are largely consumed throughout the country by all classes of people, there is a percentage of alcohol which puts them on a level with rum and whisky as intoxicants," and which has won many testimonials for them, he might have added. The book is one which every physician should recommend to his consumptive patients for perusal and study. The publishers have made the price so moderate that all can afford to buy it.

The Management of Lateral Curvature of the Spine, Stooping, and the Development of the Chest in Phthisis. By E. NOBLE SMITH, F.R.C.S., Edin., etc. 12mo. pp. 33. [London: Smith, Elder & Co., 15 Waterloo Place, S.W. 1904. Price, 2/6.

The present is another one of Mr. Smith's little books, and like everything which he writes it is full of the most useful suggestions and methods. In the present contribution we are presented with a finished presentation of the subject of the management of lateral curvature of the spine and stooping. The author not only advocates the removal of existing causes, but muscular exercises, massage, and mechanical treatment as well. He is in favor of apparatus, and shows how prejudice has grown against this form of treatment on account of clumsy apparatus. He is much in favor of Chance's splint, which he regards as constructed upon sound physiological principles. The illustrations which are given of cases before and after the use of this simple apparatus show marked improvement after a very short time in its use—marked cases of scoliosis show a straight spine and an erect posture both of which should prove a source of satisfaction to the surgeon and of comfort to the patient. The last two chapters of this interesting little book are devoted to the development of the chest and free ventilation of the lungs in phthisis, and other morbid conditions of the respiratory cavity. The author very properly insists upon a free distribution of air throughout the lungs, and for this purpose he looks upon exercise as of the highest value. If necessary Chance's splint may be worn to prevent the occurrence

of the stoop, and as it does not interfere with proper exercise, it will bring about good results in connection with proper food and dress such as does not hamper the individual.

The Complete Medical Pocket Formulary and Physician's Vade Mecum. Containing upwards of 2,500 prescriptions. Also a special list New Drugs, with their Usage. Collected for the use of Practitioners by J. C. WILSON, A.M., M.D. Third Revised Edition. Long 24mo. pp. 268. [Philadelphia: J. B. Lippincott Co. Price, \$1.75; thumb index, \$2.00.

This is certainly a handy book for those in need of formulas, and in addition to these it contains a goodly number of tables which cannot but prove to be most valuable for ready reference. As the form of the book is such that it can be easily carried in a coat pocket its practical utility is very apparent. The book not only contains a large number of printed prescriptions, but it is also liberally interleaved with blank pages to permit its carrier to insert such other recipes as he may have found valuable or which he may desire to employ on some future occasion. The edition with a thumb index is of course the better one to have for convenience in referring to its pages.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

Social Diseases and Marriage. Social Prophylaxis. By Prince A. Morrow, A.M., M.D. 8vo. pp. 390. [Philadelphia and New York: Lea Brothers & Co. 1904. Price \$3.00 net.

Are we to have a United Medical Profession. By Charles S. Mack, M.D. 12 mo. pp. 44. [La Porte, Ind.: Published and for sale by the Author. 1904. Price, 25 cents.

The Blues (Splanchnic Neurasthenia). Causes and Cure. By Albert Abrams, A.M., M.D., (Heidelberg), F.R.M.S. 12mo. pp. 240. Illustrated. [New York: E. B. Treat & Co. 1904. Price, \$1.50.

The Self-Cure of Consumption without Medicine. With a Chapter on the Prevention of Consumption and other Diseases. By Chas. H. Stanley Davis, M.D., Ph.D. 12 mo. pp. 176. [New York: E. B. Treat & Co. 1904. Price, 75 cents.

**The Management of Lateral Curvature of the Spine, Stoop-
ing, and the Development of the Chest in Phthisis.** By E.
Noble Smith, F.R.C.S., Edin. etc. 12mo. pp. 133. [London:
Smith, Elder & Co., 15 Waterloo Place. 1904. Price, 2/6.

A Manual of General Pathology. For Students. By Sidney
Martin, M.D., F.R.S., F.R.C.P. 8vo. pp. 502. With numer-
ous Woodcuts from micro-photographs and other Illustrations,
including many in Colors. [Philadelphia: P. Blakiston's Son
& Co. 1904. Price, 4.00 net.

**Diseases of the Nervous System. A Text Book for Students
and Practitioners of Medicine.** By H. Oppenheim, M.D.
Translated and Edited by Edward E. Mayer, A.M., M.D.
Second American Edition. Revised and Enlarged. 8vo. pp.
953. With 343 Illustrations. [Philadelphia and London: J.
B. Lippincott Co. 1904. Price, cloth, \$5.00 net.

**The Complete Medical Booklet. Formulary and Physicians
Vade Mecum.** Containing upwards of 2,500 prescriptions.
Also a Special History of New Drugs, with their usage. Col-
lected for the use of Practitioners by J. C. Wilson, A.M., M.D.
Third Revised Edition. Long 24mo. pp. 268. [Philadelphia:
J. B. Lippincott Co. Price, \$1.75; thumb indexed, \$2.00.

**Transactions of the American Dermatological Association at
its Twenty-seventh Annual Meeting.** Held at Washington, D.C.,
May 12, 13, & 14, 1903, in connection with the Sixth Triennial
Session of the Congress of American Physicians and Surgeons.
Official Report of the Proceedings by Charles J. White, M.D.,
Secretary. 8vo. pp. 213. Illustrated. [New York: The
Grafton Press. 1904.

**International Clinics. A Quarterly of Illustrated Clinical
Lectures and Especially prepared Original Articles on Treatment,
Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecol-
ogy, Orthopedics, Pathology, Dermatology, Ophthalmology,
Otology, Rhinology, Laryngology, Hygiene and Other Topics
of Interest to Students and Practitioners.** By Leading Members
of the Medical Profession throughout the World. Edited by
A. D. J. Kelly, A.M., M.D., with the Collaboration of Wm. Osler,
M.D., John H. Musser, M.D., Jas. Stewart, M.D., J. B. Murphy,
M.D., A. McPhedran, M.D., Thos. M. Rotch, M.D., John G.
Clark, M.D., James J. Walsh, M.D., J. W. Ballantyne, M.D.,
John Harold M.D., Edmund Landolt, M.D., and Richard Kretz,
M.D. With Regular Correspondents in Montreal, London,
Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Vol. IV.
Thirteenth Series. 1904. 8vo. pp. 321. Illustrated. [Phila-
delphia: J. B. Lippincott Co. 1903. Price, cloth, \$2.00 net.

The American Practitioner and News, of Louisville, has changed its editors. In future Drs. F. W. Samuel and A. D. Willmoth will be at the helm, and to judge from their start, this popular Southern medical journal will continue to hold its own.

Are we to have a United Medical Profession? is the title of a 44 page 12mo. pamphlet, written by Charles S. Mack, M.D. This is a special plea for homeopathy, and the author is inclined to believe that there will never be a united profession until the regulars acknowledge that *similia similibus curantur* is true. We hardly think that this will occur if we are to judge of things as they now are. The pamphlet is published and for sale by the Author, La Porte, Indiana, at the price of 25 cents.

The Calcutta Practitioner has just appeared in the first city of India. It is an octavo of 32 pages, which is neatly printed on good paper. Vol. I. No. 1 is dated January, 1904, and it is one of the two medical journals published in that city. We cannot find the name of an editor, but he will doubtless reveal himself when the journal becomes a success as all indications seem to point out. *The Calcutta Practitioner* will be published monthly at 64 College Street, Calcutta, the subscription rate being five rupees annually for India, and eight shillings for foreign countries. We welcome this new addition to the journalistic flock.

Poikilothermism in Rabies.—It has for a long time been known, according to J. O. U. Barratt (*Jour. of Physiol.*, June 15, 1903), that in animals suffering from rabies, the body temperature, which is usually described as being slightly raised toward the end of the incubation period, subsequently becomes subnormal. Rabbits at the close of the disease are poikilothermic, the body becoming cold and the rectal temperature during the last twenty-four hours of life being within a few degrees of the room temperature. This phenomenon is to be attributed to a paralysis of the heat-regulating mechanism. During this stage the respiration-rate and the heart-rate are retarded.—*Med. News.*

MISCELLANEOUS NOTES.

Cough and Restlessness in Pneumonia.—Dr. W. J. Parker, truthfully states in the January *Medical World*, that "The season for pneumonia is here," and it may be of interest to our readers to know that he has found an excellent remedy for the cough and restlessness which are such distressing symptoms of this dreadful malady in Antikamnia & Heroin Tablets. Each of these tablets contain five grains of Antikamnia and one-twelfth grain Heroin hydrochloride, and the dosage is one tablet every two or three hours according to the exigencies of the case, or at the discretion of the attending physician. We may also add, that Professor Uriel S. Boone, of the College of Physicians and Surgeons, St. Louis, also reports most satisfactory results with this remedy in pneumonia, bronchitis, and la grippe, particularly in relieving the accompanying spasmodic coughs and muscular pain.

The Treatment of Leucorrhoea.—By Lafayette Bennett, M.D., Central City, Ky. As a remedy for the local disease no agent is more trustworthy than Dermapurine. One ounce of Dermapurine to six of water and this should be injected three times daily until improvement is manifest, and then twice a day, and later once a day on going to bed. Dermapurine contains the active principles of eucalyptus and pine, boroglycerine, formaldehyde, citric acid, zinc sulphophenate, bichloride, alcohol, etc. Used in the manner already described, it quickly relieves the patient of the discharge, and the odor always so unpleasant in these cases is at once stopped. In most all cases Dermapurine will be found to be sufficient treatment in itself. Patients are pleased with the results, with the cessation of the odor, and the gradual lessening of the discharge.

A patient aged thirty-three came to me for treatment of leucorrhoea, which had been giving her much annoyance for a year. I found no constitutional vice to account for it beyond a slight anaemia. She was given some iron and Dermapurine was used in the manner already described. The patient made a prompt recovery and has had no discharge since.

Another patient, twenty-nine years old, had had leucorrhoea and slight prolapsus for a year, which she attributed to heavy lifting. She was given no internal treatment, but the Dermapurine injections were employed regularly, and she was entirely recovered in four weeks. She now feels strong and says she is in better health than for years before.

A lady, aged forty-five, had leucorrhoea of a rather profuse character, I attributed this to gonorrhoeal infection. She took only local treatment, Dermapurine injections, and made a prompt recovery.

The Medicine Man.—An elegant lithograph in eleven colors of a Medicine Man of the Sioux Indians has been sent to every physician in the United States by the Proprietors of the Tongaline Preparations and Ponca Compound.

Any physician who has not received this handsome and artistic reproduction of a famous Indian Chief can easily obtain such by writing for it to the Mellier Drug Company, St. Louis.

Ecthol in Follicular Tonsillitis.—Received sample of Ecthol, and have used same on a bad case of follicular tonsillitis with a complete cure in twelve hours. This is certainly remarkable, and am very much pleased with it. At present am using it on a leg ulcer with remarkable results, and I can heartily recommend it to the profession.
Chicago, Ill. H. B. HANNON, M.D.

The Cough-Sequela of La Grippe.—Dr. John McCarty, of Briggs, Texas, (Louisville Medical College) in giving his personal experience with this condition, writes as follows: "Ten years ago I had la grippe severely, and every winter since my cough has been almost intolerable. During January, 1902, I received a sample of Antikamnia & Heroin Tablets and began taking them for my cough, which has distressed me all winter, and as they gave me prompt relief I ordered an ounce box which I have since taken with continued good results. Last fall I again ordered a supply of Antikamnia & Heroin Tablets and I have taken them regularly all winter and have coughed but very little. I take one tablet every three or four hours, and they not only stop the cough, but make expectoration easy and satisfactory.

Sanmetto in Prostatitis, Urethritis, Cystitis.—I have used Sanmetto extensively in my practice for some years, and in well chosen cases have always gotten good results. I look upon it as a most valuable remedy in prostatitis, urethritis, cystitis, and in fact all inflammatory conditions of the genito-urinary tract.

Jackson, Mich.

W. J. CHITTOCK, M.D.

Cocaine is not Coca.—Vin Mariani was used by the profession fully twenty years before cocaine was known in medicine. In fact, through this preparation physicians were made familiar with the properties of Coca, and this was the original and only available form of employing the remedy. The popularity of Vin Mariani has led imitators to foister upon the profession artificial substitutes concocted by adding cocaine to wine. Such base frauds masquerading as Coca Wine—a title originated by M. Mariani—have done great evil and tend to unjustly cause condemnation of all Coca preparations as but false products.

Evils resulting from substitution and imitation of Vin Mariani, and the abuse occasioned by these false concoctions, have led to the introduction of State laws restricting the sale of cocaine and of cocaine preparations. Mariani & Co. are heartily in accord with such humane legislation, and as manufacturers of the standard and original Coca Wine, urge official analysis of their preparation as testimony of the confidence reposed in them by the Medical Profession who have long recognized the worth of Vin Mariani, and who continue to prescribe it. It is but just to emphasize these truths and explain the difference between a true Coca Wine and base and dangerous impositions fortified by adding free cocaine.

Daniel's Conct. Tinct. Passiflora Incarnata is sedative, hypnotic and anti-spasmodic. For a number of years the medical profession has been looking for a true nerve calmative, and as one physician expresses it: "Passiflora more than fulfills this want." For women who suffer from soreness in the lumbar region, or acute abdominal pains, it may be given with absolute assurance, because its tonic action is exerted on the whole uterine system, and therefore relieves dysmenorrhea, menorrhagia, and leucorrhea. It is the best remedy for calming the nerves of women during child-birth and the menopause. In cases of hysteria, Passiflora is a much needed hypnotic and sedative, producing the rest that is so necessary in regaining poise and strength.

ST. LOUIS
Medical and Surgical Journal.

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**A STUDY OF NINETY-ONE CASES FOR THE RELIEF
OF VARIOUS FORMS OF HERNIA WITH THEIR
COMPLICATIONS.***

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The operations performed by us for the relief of various forms of hernia as here set forth represent the work achieved during the past twelve years in private practice, at the Philadelphia Hospital and at the Jefferson Medical College Hospital. Unfortunately the majority of patients were inmates of either one or the other of these establishments, and consequently many were lost sight of after they had quitted those institutions, so that the number of cases which permanently recovered after a radical cure had been attempted cannot be definitely ascertained. The opportunity has been afforded us in twenty-nine cases to watch the permanency of the results obtained by operation, and from this number we are in a position to give some definite information regarding the subject.

As none of the cases under consideration was adapted to the employment of any of the palliative measures in vogue which are applicable to so many forms of hernia, this important division of the subject will not be considered in the study of the cases herein recounted.

The various operations performed are classified as follows :
thirty-two cases indirect inguinal hernia (strangulated); twenty-

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seven cases indirect inguinal hernia (radical operation); eight cases indirect inguinal hernia (palliative); five cases direct inguinal hernia (strangulated); one case direct inguinal hernia (radical operation); three cases direct inguinal hernia (palliative); three cases femoral hernia (strangulated); two cases femoral hernia (radical operation); three cases umbilical hernia (strangulated); three cases umbilical hernia (radical cure); four cases ventral hernia (incisional), radical operation.

The complications were: one case of bilateral hydrocele with inguinal hernia; radical cure. Two cases of unilateral hydrocele, inguinal hernia; radical cure of both. One case of tuberculosis of testicle, inguinal hernia; castration with radical operation for hernia. Four cases of inguinal hernia with undescended testicle; castration and radical operation for hernia. Three cases of inguinal hernia with undescended testicle; transplantation of testicle and radical operation for hernia. One case of inguinal hernia with encysted hydrocele of cord; radical operation for both conditions. One case of long-standing strangulated femoral hernia, gangrene of bowel with rupture, necessitating abdominal section (Richter's hernia.) One case of hernia reduced *en masse*, necessitating abdominal section. One case of appendiceal abscess rupturing into an inguinal hernia sac. One case of long-standing hematoma of the tunica vaginalis testis with large incarcerated omental hernia simulating malignant disease of the testicle. In two cases of strangulated inguinal hernia an ovary was found in the sac in one, and a portion of the bladder in the other. Gangrene of the constricted bowel in seven cases necessitated the establishment of an artificial anus; bowel opened without disturbing constriction and left *in situ* in one; resection of bowel in three cases and the removal of a doubtful spot about the size of a thumb-nail, with closure of the opening in one.

Death ensued in sixteen cases as follows: one femoral, two umbilical, one direct inguinal, twelve indirect inguinal. In twelve of the cases death was due to peritonitis; strangulation had existed for many hours before resorting to operations, taxis having been persisted in for a lengthened period without avail. Of the four remaining cases, one died from exhaustion, one died from intestinal perforation of a damaged bowel following operation, probably caused by intestinal distention succeeding

paralysis of the bowel. Death occurred on the fourth day after the operation. In one, in which the individual suffered from chronic Bright's disease, uremia was developed. In this case local anesthesia had been employed. The remaining case was one in which a radical operation had been attempted for the relief of a large reducible hernia. Examination of the urine before operation showed the kidneys to be healthy; suppression of urine intervened, and the patient succumbed.

Operations for the relief of hernia may be divided into three classes: (1) Herniotomy, an operation which is performed when strangulation exists; it is always an emergency operation, the mortality depending not only on the age, character of the hernia and condition of the patient, but is greatly influenced by the length of time that the protrusion has continued, as well as the amount of force put forth, and the duration and frequency with which attempts at taxis have been made.

(2) The so-called "radical operation," in which the hernial protrusion is not strangulated and an effort is made to effect a permanent cure.

(3) A palliative operation, by which is meant surgical intervention in cases in which, owing to the large size of the hernia, atrophy of the muscular structures of the abdominal wall ensues; the large size of the hernial outlet and the changed condition of the inguinal canal exist, and a permanent cure following a radical operation is not to be hoped for. Nevertheless, in properly selected cases, individuals suffering from this condition are materially benefited by surgical interference. The general health improves; the obstinate constipation so frequently associated with this state is relieved. The annoying sensation of abdominal tension and pain disappears, the patient being able to keep the contents of the hernial protrusion within the abdominal cavity by means of an apparatus, an impossibility before surgical interference.

Forty-two operations were performed for the relief of different forms of strangulated hernia; of which number three were femoral, three umbilical, five direct and thirty-two indirect inguinal.

It is significant to note that in every instance in which death resulted from herniotomy the operation had not been performed for several hours after the constriction occurred, and in almost every instance violent and prolonged taxis had been made at

short intervals for a lengthened period of time. In one case, that of an old man, seventy-three years of age, the strangulation was unrelieved from four o'clock in the morning until eight in the evening, during which time the patient was kept constantly under the influence of ether, taxis being frequently resorted to. On opening the sac the tissues were found to be blood-stained and the serous coat of the bowel stripped off in patches. The intestines presented a most doubtful appearance. Reports of many similar instances are to be found in the literature on the subject.

We believe that gentle taxis should be attempted for the period of about ten minutes after the strangulation occurs. Should this fail, preparations should at once be made with a view to an operation. As soon as the patient is under the influence of an anesthetic, another gentle effort should be made to relieve the constricted bowel; if this does not succeed an immediate operation should be resorted to. It is generally conceded that taxis of a strangulated femoral hernia is fraught with more danger than that of the inguinal variety (Crowley). Cases are recorded of rupture of the bowel occurring in violent efforts at reduction in femoral hernia; statistics prove that there is more danger of a reduction taking place *en bloc*, when the protrusion occurs at the femoral than at the inguinal outlet. Taxis, therefore, can be persisted in for a longer period and with less danger when the rupture is of the latter than of the former variety. It is true that in a small percentage of cases delay, the local employment of ice, etherization and taxis will sometimes result in relieving the strangulation. The number of cases in which this method of treatment succeeds is so small in comparison with the numbers that fail that it is wise to err on the safe side and operate early, thereby preventing the individual being brought to the operating table with a damaged intestine, and reducing the chance of recovery. We feel assured that no modern surgeon would be content, after a fair effort at taxis had failed, to allow several hours to elapse without affording operative relief to the patient, and would object to trusting to time and renewed resort to taxis to reduce the hernia. Symptoms of intestinal obstruction persisting after reduction of a strangulated inguinal hernia call for immediate abdominal section, as the probability is that the

hernia has been reduced *en masse*. One symptom that we have observed to be frequently present, characteristic of acute intestinal obstruction, is the peculiar character of the uncontrollable vomiting—the individual turns on his side and ejects a large quantity of watery, mucoid material, sometimes tinged with greenish bile. This is repeated at short intervals until the bystanders frequently wonder whence all the fluid matter is derived.

Of the cases of inguinal hernia operated upon, with the exception of three (these being among the earliest herein recounted), the incision employed was similar to that made for the radical cure in non-strangulated cases. The advantage of this mode of exposing the sac over the old method of raising a fold of skin at right angles to the external abdominal ring, and transfixing it, is too obvious to need any comment. In two cases in which the bowel was gangrenous, the general condition of the patients being desperate, the constriction was not molested; the gangrenous portion of the bowel was freely incised and left *in situ*. One individual recovered, and the other died, apparently from exhaustion, the patient being well-nigh *in articulo mortis* at the time of operation. In third case the gangrenous portion of the intestine was resected and the divided ends of the gut stitched to the edges of the wound. This person recovered with the formation of a fecal fistula. In three cases resection of the gangrenous portion of the intestine was performed, one being a strangulated femoral hernia, the so-called "Richter's" variety already alluded to; the second a strangulated umbilical hernia, and the third an indirect inguinal hernia. The latter recovered; the other two died of peritonitis. In one case it was found that the area of gangrene was limited to a spot about the size of a thumb-nail. This was resected and the wound closed by continuous Lembert suture. The patient made an uninterrupted recovery. The Murphy button was employed in one instance, the patient's condition being such at the time of operation as not to warrant unnecessary delay. In one case, the O'Hara anastomosis forceps was employed and found to be most satisfactory. We, as a rule, do not advocate the employment of any of the various instruments devised to accelerate the operation of intestinal anastomosis. We have been able to resect an anastomosis

quite as quickly without the aid of any of the devices suggested as with them. It is a great advantage to acquire the dexterity of operating rapidly without being hampered by the use of special instruments.

The advantages to be derived from a resection of a gangrenous bowel with anastomosis over that of establishing an artificial anus are too evident to need comment. It is only in those cases in which the patient's condition is such that any unnecessary delay would add to the danger of a fatal result that an artificial anus should be established. Local anæsthesia was employed in cases in which the patient's condition at the time of operation was desperate. It was not found, as is so frequently claimed, that the intestine could be manipulated without pain.

In every instance in which the patient's condition warranted the attempt, an effort was made to effect a radical cure after the constriction had been relieved and the contents of the sac returned. The additional work necessary to produce a permanent cure, as a rule, requires but very little additional time and should always be attempted whenever possible. In cases in which general peritonitis existed accompanied by paralysis of the bowel, the method of treatment suggested by Dr. Andrew J. MacCosh (*Ann. Surgery*, June, 1897) was adopted :

Two ounces of a saturated solution of magnesium sulphate were injected into the small intestine as high up as possible by means of a hollow needle attached to an aspirating syringe. the little wound in the bowel being closed by means of a Lembert suture. We are convinced that in at least three cases life was saved by this means of treatment. When peritonitis was present the abdominal cavity was irrigated with a large quantity of hot normal salt solution, and drained. If there had been no injury to the bowel, ten grains of calomel were administered as soon as the patient had recovered from the effects of the anesthetic. A large dose of the mild chloride of mercury in paralysis of the bowel, with marked distention, is always beneficial ; not only does it have a tendency to induce peristaltic action, but it is an excellent diuretic, having a proneness to prevent suppression of urine which sometimes accompanies abdominal complications. Small doses of the remedy, repeated at short intervals, will not produce the

active vermiculation which is obtained by the administration of a single large dose.

In one case of strangulated hernia, on opening the sac after separating the omentum and intestines, there was found to be, lying posteriorly, what appeared to be a cyst. The nature of the cystocele was not at first recognized, protrusion of a portion of the bladder being suspected; the urine was withdrawn by means of a catheter, when the tumor immediately subsided, thereby verifying the diagnosis. There were no symptoms present before operation which would tend to show that the bladder was in any way connected with the hernia. We have had the opportunity to observe two similar cases; they were inmates of the Philadelphia Hospital, and came under the care of our colleagues. In neither case were there any symptoms present that would lead a surgeon to suspect that the bladder was in any way implicated. In one of the patients the bladder was opened by mistake and in the other the organ was recognized and returned to the abdominal cavity. Hernia of the bladder may occur alone or it may be associated with a protrusion of the intestine and omentum. The diagnosis of the condition is but rarely made before operation. The condition may be suspected if there is an unexplainable frequency of micturition, and the history of the tumor shows that it diminishes in size or disappears after urination. The suspicion that the bladder forms a portion of the hernial contents can be determined by drawing off the urine by means of a catheter. On removing the urine the size of the swelling will diminish; after evacuating the bladder it can then be dilated by means of either air or water and the tumor will immediately reappear.

Hernia of the bladder alone may be mistaken for an ordinary hydrocele or a hydrocele of a hernial sac. Several cases are on record in which a hernial protrusion of the bladder has been tapped under the belief that the cyst was a hydrocele of the vaginal tunic. On opening the sac the bladder may be recognized, if present, by the discovery of what appears to be a cystic tumor, which usually forms part of the wall of the sac. The usual presence of fat over the cyst and outside of the sac, the characteristic unstriped muscular fibers composing the wall of the bladder, and also occasionally the longi-

tudinal veins which are found in the vicinity of the fundus of the organ, which are frequently much engorged and consequently prominent, should aid in making proper diagnosis. Moreover, when the sac has been twisted, preparatory to resection, if the bladder be included, suspicion should be aroused by the unusual thickness of the structure.

When a portion of the bladder is found to form a portion of the contents of the hernial sac, it should be freed from any adhesions that may exist and returned to the abdominal cavity. Should the protrusion of the viscus assume the form of a diverticulum, it is generally considered wisest to resect the pouch and close the opening made in the bladder by two rows of sutures.

In a private case operated upon at St. Joseph's Hospital for what was presumed to be an incarcerated inguinal omental hernia, the sac was found to contain the ovary and Fallopian tube with a piece of indurated omentum. The latter was resected and the ovary and tube freed from adhesions and restored to the abdominal cavity. The tumor had existed for three years, during which time it had been gradually increasing in size with increased induration. The patient stated that it was the seat of much pain during menstruation. The cause of this was inexplicable before operation.

Little is known as to the etiology of hernia of the ovary. The diagnosis is but seldom ascertained before the operation. The condition may be either acquired or congenital, the latter form being the most common. The sac may contain only the ovary or the Fallopian tube; both structures, however, may be present, associated with other viscera. The rupture usually occurs on the left side; cases are on record in which the protrusion has been bilateral. Statistics show that the inguinal variety is by far the most common. The ovary has been found in Scarpa's space and even in the obturator foramen. So far as we have been able to ascertain, there is no case on record in which the ovary has been found associated with a femoral hernia.

A study of hernia and its literature during the past fifteen years shows that the subject of its radical cure has exercised the ingenuity and talents of surgeons to a remarkable degree. Different methods of attempting to effect a radical cure of the inguinal variety have been suggested by as many as twenty-

five operators, viz.: Ferguson, Nélaton, Ombredane, Bernhardt, Deaver, Ball, Stimson, Landphere, Mayhean, Phillips, Czerney, Socin, Thomas, Schawtz, Barker, Martin, MacCuen, Bloodgood, Eccles, Beck, Fowler, Kocher, Halstead, Bassini, and Benjamin. These gentlemen each recommend a different method of operating in hopes of achieving success.

Many of these operations still have their advocates; some are forgotten; others have fallen into disuse; a few are yet on trial. The fact that so many different methods of operating are still to be tested would seem to prove that the proper method thus far to be selected in the hopes of procuring a fundamental cure, depends on the particular condition that each case presents, as well as the character of the tissue of the individual with whom the operator has to deal. As Eccles very aptly puts it: "A uniformity of procedure in suturing the canal implies that all inguinal hernias are alike and implies similar treatment, — a fact that experience entirely and necessarily discredits, *each case having to be dealt with on its own merits.*" This statement appears to us to be the keynote of the situation and explains why a particular operation will not succeed in each instance, and hence the existence of so many different methods to effect a radical cure that are in vogue.

In spite of the fact that the profession is at variance as to the most suitable operation to be selected for the radical cure of hernia, accumulated evidence derived from a large number of different operations has narrowed the choice of methods adopted by the majority of surgeons in this country down to a few, which may be enumerated in order of their popularity as the Bassini, Halstead, Kocher, Bloodgood, and Fowler, the last named being still on trial. Each has its advocates. As has been already pointed out, none is probably suitable to every variety of inguinal protrusion. Frequently the surgeon must use his ingenuity and experience as a guide to the best method of procedure.

The popularity and confidence evinced by the profession in the United States for the Bassini operation are probably largely due to the writings of Bull and Coley, who published an article in the *Annals of Surgery* for 1898, in which it is demonstrated that attempts to effect a radical cure of inguinal hernia were disappointing until the Bassini method of operating, together

with the employment of the absorbable sutures, was adopted. The results of 1053 operations are tabulated, of which 522 were performed by Bull and 531 by Coley.

From our own experience and from the knowledge gained from the study of the literature of the subject, we have learned to believe that the Bassini is the proper method to pursue for the radical cure of the majority of patients afflicted with inguinal hernia; but cases will arise from time to time in which we must deviate from the directions suggested by Bassini and select some other means of operating in order to effect a cure. When the conjoined tendon is either so attenuated or so obliterated that Hesselbach's triangle has lost its strongest support, transplantation of the rectus muscle is employed after the method suggested by Bloodgood (*Bull. Johns Hopkins Hosp.*, May, 1891); the remainder of the operation is performed by the Bassini method.

Whilst some authorities still advocate aseptic silk and silver wire for the buried sutures when closing the various structures, the mass of clinical evidence is against their employment, the material of choice being kangaroo tendon and chromicized catgut.

Of twenty-nine cases in which a radical cure was attempted, whose after course could be traced, the result may be tabulated as follows; eighteen indirect inguinal; Halstead one; Fowler one, and the remaining after the manner suggested by Bassini. Six indirect inguinal hernias; strangulation existing at the time of operation. In these cases after relieving the constriction, the Bassini or Bloodgood operation was performed. One indirect inguinal hernia; Bloodgood operation. One ventral hernia, following a celiotomy. Two umbilical hernias; one the ordinary method, the other the Mayo operation. One femoral hernia; Bassini method.

Of the eighteen cases of non-strangulated inguinal hernia, all have remained permanently cured for a period varying from one up to ten years, save in one instance, in which a recurrence took place one and a half years after operation. In this instance the protrusion was large and had existed for several years, during which time a truss had been constantly worn. The case was one in which a Bloodgood operation should have been performed. Unfortunately the radical cure was attempted

before this method of operating had been suggested. Of the six cases in which a radical cure was attempted at the time that the strangulation was relieved, one recurred in nine months and another two years after operation, this patient being seventy-three years old when the herniotomy was performed, the hernial protrusion having existed fifteen years. In none of the remaining cases has recurrence taken place. Only six months, however, have elapsed since the operation for relief of femoral hernia was performed. Clinical evidence has shown that if a recurrence is likely to occur, it usually takes place within six months after the operation, and that the chances of recurrence are greatly diminished after one year.

The case of umbilical hernia operated upon after the method suggested by Mayo has been found to be the most satisfactory for the relief of this form that we have ever employed. It is nine months since the operation was performed, and up to this time the individual continues in excellent health; there is no tendency to recurrence.

In the cases in which either a unilateral or bilateral hydrocele existed as a complication, the hydrocele was partially resected in one, and in the two remaining patients the Doyen method was adopted. All made uneventful recoveries. So far, there has been no tendency to a recurrence of either the hernias or hydroceles. In the case of hydrocele of the cord, the tumor was the size of a small orange, which was dissected out in its entirety.

In the case of tuberculosis of the testicle complicated with hernia, it was found necessary to resect the entire vas deferens together with the removal of the testicle. Two years have elapsed since the operation; so far there has been neither a return of the rupture nor any evidence of further tuberculous infection. It is true that the patient has had the advantage of fortifying his constitution by a sojourn for a year and a half in New Mexico.

In seven cases of undescended testicle, associated with inguinal hernia, one was an iliac retention, the testicle being found in the iliac fossa near the internal abdominal ring. In the remaining cases the organ was located either in the inguinal canal or at the external abdominal ring. In four of the cases the hernia had insinuated itself beyond the retained testicle

and had passed into the scrotum. In one case the presence of the testicle prevented the protrusion of the bowel beyond the external ring. In this case both the rupture and the testicle were found in the inguinal canal.

If the individual with an undescended testicle is under thirty years of age and is strong and vigorous, the chances are in his favor of not being sterile. If, however, he is effeminate, has a falsetto voice, small, undeveloped penis and absence of hair on the pubes, the condition being bilateral, the testicles having been the seat of repeated attacks of orchitis, the probabilities are that the patient is incapable of procreation. Provided the testicle was healthy, even if somewhat atrophied, it has been our custom to save it whenever it was possible to do so. On more than one occasion we have been gratified to find that after the transplantation an atrophied testicle has developed into almost its normal size when placed into its normal position. Many cases are on record in which men with undescended testicles have married and succeeded in impregnating their wives. For this reason the individual should always have the benefit of the doubt; the sexual glands should not be sacrificed, if possible; moreover, it is well known that the loss of one or both of the glands is frequently conducive to great mental depression and even melancholia.

Clinical experience has taught that resection of the epididymis and vas deferens in cases of diseased condition of those organs, the testicle retains its normal size, sexual vigor is unimpaired, the mentality of the patient remaining undisturbed. This observation places the testicle among the ductless glands. It would appear that one of the functions of the testicle is to elaborate a secretion, the absorption of which is of vital importance to the preserving of the normal condition of the nervous system. If this theory be true, the organ should never be sacrificed if there be a chance of its being preserved. In one instance, after freeing the adhesions of an undescended testicle, it was found that on placing the organ in the scrotum the tension on the cord was very great. In order to relieve this condition the method suggested by Mr. Wood was adopted. The globus major was dissected free from the testicle, far enough down to permit of the organ being inverted. By this means one and a half inches in length was gained. After a

testicle had been transplanted, not only was it fastened by means of a suture to the bottom of the scrotum, but the cord was stitched to the pillars of the ring.

Eleven cases were treated by what may be denominated the "palliative operation"; they were of long standing with large hernia, enormous hernial outlets, and atrophied muscular abdominal walls. Eight were indirect, and three were direct inguinal hernias. Two had been incarcerated for a long time; three were partially so, and three were reducible; but the individuals were unable to retain the mass by any form of apparatus that was employed. Four were of large size, the remainder being of the dimensions of the average hernia. These individuals were annoyed by flatulence, eructations, constipation, occasional nausea and colicky pains. In each instance the individuals were incapacitated for work, so that they necessarily became involuntary idlers and habitues of the Out Wards of the Philadelphia Hospital. In none of these cases was it presumed that the operation would result in a permanent cure. It was undertaken simply in order to relieve the symptoms and in hopes that after convalescence the individuals would be enabled to retain the intestinal protrusion by means of a properly applied truss. In each instance the result justified what might be regarded as an experimental operation; all were much improved and all were enabled to retain the bowels by means of a suitable apparatus.

In cases of this description the surgeon cannot follow the fixed rules laid down for any recognized operation; he must utilize his experience and judgment with such available resources as he may have at command. In two cases in which the rings were large and the conjoined tendon weak or absent, the Bloodgood method was adopted. For the closure of enormous hernial outlets with large protrusion associated with an atrophied condition of the muscular structure, cases hitherto considered as inoperative, Witzel suggested the closure of these large apertures by means of buried silver netting (*Cent. f. Chir.*, March 10, 1900).

In spite of the apparently favorable results obtained in the few reported cases, we cannot help feeling skeptical as to the value of the procedure and are inclined to believe that a more extended experience with this method of attempting to close

large hernial outlets will prove unsatisfactory. As has already been pointed out, the employment of the buried silver suture, from the use of which so much was expected when first introduced to the notice of the profession, has not come up to the expectations and has in consequence been abandoned by the majority of surgeons. We can see no reason why, therefore, the employment of silver netting, filagree or allied devices should not meet with a similar fate. Nevertheless this method of attempting to relieve what was hitherto supposed to be an inoperative condition is still on trial. It certainly merits the careful study and serious consideration of the profession. The gratifying results obtained in the few cases that have been reported are most encouraging, and it is hoped that a more extended experience with this mode of treating cases of the kind will result in demonstrating that a large number of these unfortunate sufferers who are now condemned to a life of pain and misery may be capable of being relieved.

In each case of the kind operated upon by us a different method was employed. In our judgment, in selected cases of long standing incarcerated hernias and those that are reducible, but cannot be retained by the employment of a truss, the chance of relief should be attempted and comfort afforded by a palliative operation. Not with the hope of making a permanent cure, but to relieve the distressing symptoms which naturally accompany such a condition, an effort should be made to retain the rupture by means of a suitable apparatus. We are convinced that too many surgeons give too little attention to the selection of a suitable truss for non-operative cases. As a rule, the patient is sent to a truss maker, who applies the variety of instrument that in his judgment is best suited for the case. It is true that the average truss sold by instrument makers will usually serve to retain the ordinary hernias. Occasionally the truss does not hold the protrusion in place, when the patient is told that is impossible to retain the rupture by means of an apparatus. A careful study of the cause which prevents the truss from being satisfactory, together with the anatomical peculiarities which exist in each instance, will result, in the earlier stages of reducible hernias, in keeping them satisfactorily in place by the use of a suitable device.

It is generally conceded that age makes but little difference in the mortality when operating on strangulated hernias.

provided the constriction is relieved without using taxis inordinately before resorting to operation. The extremes of life seem to bear the operation well.

Regarding the age when a radical operation can be performed for the relief of hernia with the greatest certainty of a favorable result, the views advanced by Coley have been generally accepted in this country, the most favorable period being about the sixth year. In the adult, without good cause, it is not well to attempt a radical cure after sixty, and not then in very large and incarcerated hernias.

Coley teaches that if, after an operation, a recurrence is liable to take place, it usually does so within six months, and that if the patient remains in a healthful condition for one year it is usually safe to predict that recurrence will not take place. In three cases we have had a recurrence after two years. We believe in the main that Coley's views are correct.

There is a certain class of patients subject to hernia who are unfit for a radical or palliative operation unless the protrusion becomes strangulated, when the danger is greatly increased; but, of course, the individual must be allowed to take his chances. Unsuitable cases for either a radical or a palliative operation are the obese, in whom the abdominal wall bulges far forward; persons who suffer from any disease of the viscera, and those who have an incarcerated hernia of enormous size and long standing. Those who necessarily wear a truss after an operation are individuals who suffer from a direct inguinal hernia; those in whom an infection of the wound has taken place after an operation; all operations which might be classed under the head of palliative; in hernias of long standing; in individuals who have to earn their livelihood by hard labor; in emergency herniotomy where the patient's condition would not warrant the employment of the length of time required to do a radical operation, and in children in whom it was found that the hernial ring was unusually large. According to Eccles, those who have a poorly developed muscular abdominal wall and a family history of tendency to hernia should always wear a properly fitting truss after undergoing an operation.

From a study of the cases recited in this paper, the following conclusions seem to be warranted:

(1) The safety of the patient as well as the lowering of the mortality in strangulated hernia depends on gentle taxis being

exerted for a short period, which if unsuccessful should be succeeded by an immediate operation.

(2) Herniotomy for the relief of strangulated hernia in the aged is not a dangerous operation, provided it is performed as soon after the constriction has taken place as possible.

(3) An inflamed hernia should not be treated by taxis, but should be subjected to an operation.

(4) No one method of attempted radical cure is applicable to every variety of rupture. The Bassini is suitable to the largest majority. The Bloodgood for those in whom a large abdominal ring and weak or atrophied conjoined tendon exist. The relief of special forms and conditions of hernia must be met by the ingenuity of the surgeon, selecting the operation to the indications presented.

(5) The palliative operation is applicable to a large number of selected cases of reducible hernia, when the protrusion cannot be kept within the abdominal cavity by means of a truss, and also in some forms of incarcerated hernia.

(6) A radical cure may be safely attempted on patients who have reached their sixth year and on those who have arrived at their sixtieth year.

(7) Individuals who submit to what is known as the "palliative operation" should continue to wear trusses after recovery.

(8) In cases not applicable to a routine method of operation the surgeon should strive to do what in his judgment would be the best means of affecting the removal of the entire neck of the sac on a level with the parietal peritoneum. He should, if possible, firmly close the opening in the peritoneum after the removal of the sac; he should obliterate the depression of the peritoneum in the vicinity of the internal abdominal ring, bring in apposition the structures, and close the apertures which form the canal through which the rupture protrudes.

(9) An aseptic result following a radical operation with primary union, is essential to obtain a permanent cure of hernia.

(10) In cases of undescended testicle associated with hernia every effort should be made to save and transplant the organ.

(11) The method of operating for umbilical hernia suggested by Mayo is probably the most satisfactory for that variety hitherto suggested.

(12) Absorbable sutures are preferable to those of non-absorbable material.

**BRIEF OBSERVATIONS ON SOME CONDITIONS IN
WOMEN THAT ARE OF MUCH CONCERN
TO THE PRACTITIONER.**

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The conditions of which I wish to speak are dysmenorrhea, and the state following miscarriage or abortion, in which there are retained portions of the placenta and membranes that require removal or expulsion.

For lack of space, I shall devote myself, in the present paper, chiefly to dysmenorrhea, and will dismiss the condition following abortion with a few remarks, which may as well precede the other part of my article. I reserve for a future communication the detailed discussion of this important and interesting clinical condition.

The effects of retained placental or fetal tissue in a partially successful miscarriage or abortion consist in hemorrhages, purulent discharge, enlargement of the uterus, subinvolution, metritis, endometritis and sepsis. The indications in these cases are, therefore, the thorough emptying of the uterus and the rendering of the womb-cavity aseptic.

In ordinary cases this must be done by surgical interference, including curetting and the removal of all decomposing and diseased tissue, followed by the application of antiseptics to the endometrium. There is a class of cases, however, in which for one reason or another curettage is refused by the patient, and in which it is incumbent upon the physician to give what relief he can by medical means. In such cases I have prescribed Ergoapiol (Smith), a combination of the active principles of ergot (ergotine), parsley (apiol) and certain other emmenagogues and uterine tonics. In one case of this kind, which came under my observation some months ago, I used Ergoapiol (Smith) with such marked success, that I learned since then to rely upon this preparation in removing the retained fragments from the uterus, emptying the organ and reducing it to its normal size and functions. The remedy in question has proved so trustworthy in my hands in these cases, that when it disappoints, which it rarely does, I look about to ascertain wherein I myself have erred.

A discussion of the causes of dysmenorrhea would lead us too far in the present brief clinical paper, and it will suffice if I

assume that the reader is acquainted sufficiently with this part of the subject to follow me in the remainder of the article. The clinical diagnosis of dysmenorrhea is in itself easy enough, while the diagnosis of the cause is not always so simple. In the cases presented here I paid especial attention to the causation of the menstrual pain, as I believe that in this manner I was better able to outline the indications for treatment. It goes without saying that dysmenorrhea from mechanical obstruction is not amenable to medical treatment. Fortunately, however, it has been in my experience at least not frequent, as dysmenorrhea depending upon congestion. The specially disagreeable and intractable form of dysmenorrhea which is accompanied by a fetid discharge as a result of the decomposition of the retained menstrual blood, also comes under discussion here, as the use of douches with antiseptics and deodorants cannot be hoped to affect it permanently, while the employment of more radical medicinal means does bring about the desired effect in this condition.

In congestive dysmenorrhea, and in that form which is accompanied by fetid discharge, the indications are to diminish congestion, by promoting the contractions of the uterus and relieving it of the accumulated blood, to stimulate glandular activity in the mucosa, to restore the tone of the uterus and the nutrition of its tissues to normal, and to relieve spasm and pain.

The following cases illustrate the effects which I obtained with the use of Ergoapiol (Smith) in the treatment of dysmenorrhea :

Some months ago I was consulted by a young woman who had suffered from scanty, fetid menstruation, accompanied by a great deal of pain, since the birth of her first child seven years previously. Her labor had been followed by a tear of the perineum which had been left unrepaired, and also a laceration of the cervix uteri. This patient consulted a specialist, but his treatment did not give her relief. Examination revealed the presence of the uterine and perineal lacerations already mentioned, and disclosed a chronic endometritis that had given rise to a fetid discharge and to pain during each menstrual period. I repaired the tears, curetted the uterus, and hoped in this manner to obtain permanent relief of the

patient's symptoms. After she had recovered from the operations, she declared that she was feeling better than she had been for years. But very soon the fetid discharge and the pain returned at each menstrual period, and evidently something else had to be done if I wanted to save my reputation. I then tried local applications, alteratives, uterine tonics, etc., all without avail, until finally Ergoapiol (Smith) was given. The result was immediate relief and a gradual and permanent improvement in the menstrual flow until it was free from pain and devoid of any disagreeable odor.

This patient was evidently suffering from congestive dysmenorrhea, which was intensified by the presence of lacerations of the cervix and the perineum which had existed since parturition. The result attained illustrates very well how Ergoapiol (Smith) acted upon the uterus, restoring its tissues to normal condition and re-establishing the menstrual function upon its normal basis.

Another type of dysmenorrhea, that which I term "nervous," but which the authorities term "neuralgic," is illustrated by the the following case which recently came under my care:

The patient was a young woman who had been married two years, but had not borne any children. She stated that she had pain during the menstrual period from the first onset of menses, and at the time of examination she also complained of a fetid discharge. The menstrual flow was scanty and rarely of blood red color. Just before and after the period she had backache and headache, her complexion was unhealthy, not bright and clear as that of her sister, and she appeared older than she really was. She always dreaded the onset of the menses which recurred with a regularity that is not always present in these cases. She was easily excited, and received impressions vividly and indelibly. Her digestion was poor, and she was often sleepless, irritable, and peevish.

Vaginal examination revealed a slightly thickened os and slight endocervicitis, with erosions of the cervix. Cod liver oil, malt extract, hypophosphites, and aromatics, in combination, 25 per cent. of each, were given freely during the intervals between the menstrual periods, and for three days before the expected menstruation Ergoapiol (Smith) was given in capsules, one being given three times daily until the dis-

charge ceased. At the fourth period after the beginning of the treatment she was relieved of all her symptoms, and was free from pain and fetor during menstruation. Locally, tincture of iodine and occasionally tampons of ichthyol and glycerine were applied. The cure was permanent and in every way satisfactory.

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THE OPERATIVE TREATMENT OF MALIGNANT DISEASE OF THE MAMMARY GLAND, RECTUM, PENIS AND LIP.*

BY WILLIAM L. RODMAN, M.D., PHILADELPHIA, PA.

I was led to choose this subject for your consideration to-night after talking with a surgical friend, both of us having heard recently the papers in the symposium upon the value of the X-rays in inoperable cases of carcinoma. It occurred to me that it would not be an inopportune time to say something of operable cases, and of what we may expect at the present time, if a timely and rightly done operation be performed. It is not necessary for me to emphasize the ever-increasing frequency of malignant disease, inasmuch as that has been done by Williams, Snow, Cheyne and many others of the English school, and by Park, Warren, Lewis, Milus and others in our own country.

The reports of the Registrar General of Great Britain indicate that malignant disease is at the present time five times as frequent as it was in 1840. At that time there was one case of malignant disease to every 5,646 patients living; at the present time there is one case to every 1,306. In our own country and in Continental Europe this same increase in the frequency of malignant disease has been manifested. Roswell Park, in his Report as Director of the Pathological Laboratory to the New York State Legislature, made the statement several years ago that within ten years of that time that carcinoma would claim more victims in New York than consumption, smallpox and typhoid fever combined. When we remember that each of these three diseases is decreasing in frequency, and

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that to a large extent all are preventable, we can understand how such a prophecy as this may be fulfilled. Certainly the conservatism of Park and the care with which he made this prophecy, basing his estimate on figures in New York State for the preceding eleven years, would indicate, at least, the increasing frequency of malignant disease.

Williams estimates that there are more than 10,000 people in England and Wales alone with mammary carcinoma. Before taking up mammary carcinoma I wish to say a word about the anatomy of the mammary gland. We should remember what Mr. Stiles of Edinburgh says, that there is no capsule to the mammary gland and that, therefore, it is a very common thing to have outlying glandular elements. These may be in the axilla or they may be in the most unexpected situations. One should always have the possibility of outlying glandular rudiments in view and should make wide incisions. The second and more important anatomical point is the fact that the lymphatics of the mammary gland are more important than was formerly taught by Sappey and other anatomists. Instead of the single chain of lymphatics beginning at the areola and following along the skin to empty finally into the axillary nodes, we find there are several other chains which are just as important. There is a second chain of superficial lymphatics which drains the skin of the axillary portion of the gland. These vessels pass internally, perforate the second and fourth intercostal spaces and empty into the mediastinal glands. In addition, there are three deep sets: one which begins in the milk ducts and acini, which drains the axillary portion of the gland and, passing superficially, unites with the first set and with it forms a network passing around the axillary vessels up to the clavicle where they discharge. A second set drains the sternal half of the gland and passes with the second superficial set through the second and fourth intercostal spaces along with the internal mammary artery and empties into the anterior mediastinal glands. A third set drains the retromammary tissues and perforates the intercostal spaces to pass along with the intercostal arteries to the vertebral column. In that way we can understand the not infrequent metastasis of malignant disease to the vertebral column, resulting in paraplegia.

I think that, undoubtedly, the statistics of Americans and Germans, concerning the results of the operative treatment of malignant disease of the breast, are rather too optimistic, so far as the immediate mortality is concerned. It is easy to collect many individual series of from fifty to 125 cases without a single death. These results cannot be accepted as average ones. I think the one per cent. put down by some American authors is too small. I think the 12 and 15 per cent. of the English and of many of the Germans is too large; but I would say that from 3 to 5 per cent. should represent the outside mortality in a very complete operation on the mammary gland at the present time. It would not appear that the more extensive operations, such as Halsted's, in which both muscles are removed and the axilla thoroughly cleaned out, are any more serious than the minor operations. Halsted had a series of seventy-six cases without a single death. Many others have had a large series without a death. In my own experience I have not been so fortunate. In rather more than 100 operations upon the breast I have had two deaths; one, in an elderly woman, seventy-six years of age, a patient of Dr. William E. Hughes. She died suddenly ten or eleven days after the operation from heart failure. She had a marked murmur which we recognized at the time of the operation. I, however, attribute her death to the operation, and count it an operative death. The other case was a patient, forty-three years of age, who had a very large breast and an enormous growth in the axilla which required a most extensive operation. She was under the anesthetic for three hours, and died as the result of the ether on the third day. There was complete suppression of urine after twenty-four hours, and only four ounces were secreted on the first day. I think that at the present time as we get cases, many of them late, with extensive glandular involvement, that we cannot hope to produce a radical cure in more than $33\frac{1}{3}$ per cent. I think it is conservative at the present time to state that at least one-third of such cases ought to be cured, even though they be cases of the second and third degree, in which there will be not only axillary involvement, but also a more or less fixed mammary gland. We find, however, more optimistic reports, some surgeons claiming 50 per cent., and one as high as 85 per cent. Of my

six cases of cure after operation; one has gone six years; one has gone five years; two have gone four years; two have gone just barely over three years. One patient who was operated on in November, 1900, is here to-night.

The first cure that I had was really the most gratifying one of the series. In the Fall of 1897 I operated on a patient for Dr. H. B. Critzman of Welch Run, Pa., who had been operated upon twice before. There was extensive recurrence in the sternal half of the gland and marked axillary involvement. I made one of the most complete operations that I have ever done. I saw the physician about a year ago and asked him how long that woman lived after the operation. He said: "I saw her yesterday. She is in perfect health and uses her arm as well as ever in her life, and asked to be remembered to you." Five years after the operation she was perfectly well in every respect.

One case that I would like to speak of is that of a young colored woman, reported to the Philadelphia Academy of Surgery three years ago. She was operated on for recurrent malignant disease. There was recurrence for which a second operation was performed, and at this operation a large number of glands were removed from the neck, there being a mass in the subclavian triangle as large as a lemon. There was a further recurrence, and for this a third operation, which was the most extensive I have ever done. The woman was only twenty-three when the carcinoma began; in my experience that is a bad prognostic sign. The younger the case, the more rapidly fatal it is. The woman is in fairly good condition to-day, considering the recent and rather extensive operation; it being necessary to resect parts of two of the ribs and a portion of the sternum so that the pleura was exposed. She recovered from the operation very nicely, and so far as I can judge there are no metastases elsewhere. That, of course, cannot be counted as a cure, and I only report it to express my surprise that she is alive.

I wrote to Professor Halsted asking what had been his results with recurrent cases and I have his letter from which I will read an extract:

"We have only once or twice succeeded in saving a case of recurrence of carcinoma of the breast. The case which you

speak of is certainly a remarkable one and I imagine very few have made this experience. I shall be much interested to know if the axillary glands were involved at any time in this case. One of the cases of recurrence saved by us had supraclavicular glands involved as well as axillary. At the second operation a portion of the subclavian vein, as well as the supraclavicular glands, were removed. Another case was an adenocarcinoma, without glandular involvement. She had had several recurrences before consulting us, and was cured by the operation at the Johns Hopkins Hospital. Last spring I operated upon a case of colloid carcinoma, the second recurrence, I think, but in this case at the time of my operation there was no glandular involvement; the first operation was performed five or six years ago, I think. I shall be interested to know if you have cured any cases with supraclavicular involvement."

There was, as I have said, extensive axillary involvement.

Malignant disease of the penis is nearly always carcinoma. A dozen or more well-authenticated cases of sarcoma have been reported, but practically the number is so insignificant that they need not be reviewed. These growths are usually of the squamous epithelial type, but scirrhus may occur. The anterior part of the penis is the part usually involved. As a rule, the incision is made three-quarters of an inch posterior to the lesion. I have here to-night a patient who was shown to this society immediately after the operation three years ago. He weighs eight pounds more than he did at the time of the operation. He is absolutely free from recurrence, never had the slightest difficulty with micturition and has intercourse as well as formerly. The glands were removed from both groins and the wounds united by first intention. The scar of one side is very faintly visible to-day. I would be glad to have the patient examined, because the natural skin covering of the penis is as good as one could wish to see.

In a second case there was a very extensive epithelioma of the penis. The organ was removed close to the body and the glands were removed from both groins. On the right side particularly there was such extensive glandular involvement that in my manipulation of the femoral glands I ruptured the saphenous vein and had to resect it. Butlin reports twenty-

three cures in sixty-five operations, or rather more than 35 per cent. We should do better by present methods.

In all I have records of five undoubted cures of carcinoma of the penis. In 1892 I operated upon a man sent by Dr. Thos. L. McDermott, of Louisville, Ky., and he was alive and in perfect condition at the last report from Dr. McDermott one year ago. In 1896 I operated upon a man about seventy years of age, sent also by Dr. McDermott. The last time I was in Kentucky, less than a year ago, I found that he was entirely well and free from recurrence. A third case operated upon at my clinic in the Kentucky School of Medicine was sent to me from Lebanon, Ky., in 1896.

The immediate mortality from operations upon the penis should not be more than 1 or 2 per cent. Butlin, from a large number of cases, makes a mortality of 4 per cent. when the knife is used, and 14 per cent. when the galvanocautery is employed. I cannot understand why there should be this mortality, unless many of these cases became septic; since it oftentimes is almost impossible to keep from infecting the wounds made in the groins. Even though infection takes place, I cannot understand why the mortality should be as great as 4 per cent. I have had no deaths myself.

In all cases of amputation of the penis I insist that the operation is not completely done unless the groins be opened, whether they seem to be involved or not. I recall a sad case in which failure to operate upon the opposite groin caused me to lose my patient, who otherwise might have been saved. In 1890 I saw a patient with Dr. Peyton, of Jeffersonville, Ind., and while we did an extensive operation on the penis and opened the groin, which was visibly affected, we failed to open the opposite groin, because it did not seem to be involved. The man lived about two years and died from recurrence in the groin not operated.

I have not had a great number of operations upon the rectum. I have one case in the anteroom operated upon about one year ago. The man has gained eighty pounds since operation. He was cachectic at the time and had a most extensive carcinoma of the rectum. I removed the lower four inches by the perineal route and did a preliminary colostomy. He is absolutely free from recurrence, but, of course, a year is too

short a time to reckon the case a cure. Another case operated upon two years ago assures me of no return, and I feel that the patient has nearly passed the danger limit. Mr. Cripps insists that if recurrence does not take place within three years it will not at all. I believe the primary mortality for excising the rectum should not be more than 3 to 5 per cent by the perineal route. It will be at least 10 per cent with the Kraske method or its various modifications. McCosh reports 439 cases with a mortality of 19.1 per cent. That method enables the operator to get out the glands in the sacrum more easily. I prefer when practicable to perform the operation by the perineal route. As to ultimate results, Butlin reports 100 cases with twenty-one recoveries; all had passed the three-year limit. That is as good as we can expect. With the more complete operations now done we will probably get a larger per cent of cures.

Carcinoma of the lip gives the most hopeful prognosis of malignant disease anywhere. Butlin reports a very large number of cases and he estimates that the primary mortality is much greater, I am sure, than any one would think, between 7 and 8 per cent; 1010 cases with seventy deaths. This is on account of the fact that so many operations are extensive and embrace not only the enlarged glands below the jaw, but also the bone, which is excised very freely. So far as the ultimate results are concerned Butlin estimates 53 per cent of cures. I am sure that this does not overstate it. I have an impression that surgeons at the present time are curing more than half of their cases of epithelioma of the lip. Whether the submaxillary triangles seem to be infected or not, they should be opened and any suspicious parts removed. It is just as difficult to detect enlarged glands here as in the axilla before an incision is made. If this is done in every case, I have no reason to doubt that we will cure not only 53, but practically 75 or 80 per cent. of such cases.

THE VALUE OF HISTOLOGICAL EXAMINATIONS IN CARCINOMA OF THE UTERUS.*

BY BROOKE M. ANSPACH, M.D., PHILADELPHIA, PA.

While X-ray therapy seems to have increased the armamentarium of the physician against carcinoma, the chief remedial agent today is found in surgical intervention. Many operations have been devised for the complete extirpation of carcinoma of the uterus. The fact remains, however, that a large proportion of the cases which reach the surgeon are incurable. This statement applies more to carcinoma of the cervix than to carcinoma of the fundus. It need not be proved that the earlier a case of carcinoma of the uterus falls into the surgeon's hands, the more favorable it is for cure. No matter how extensive the radical operation may be, if the carcinoma is of any age, its recurrence is more or less a matter of time. A large number of those who formerly practiced the extensive radical operation for carcinoma have finally become convinced that if the disease has once advanced beyond the limits of the cervix the case, so far as a permanent cure is concerned, is hopeless.

The reason for this is that in the extension of a carcinoma we are dealing with an extension that involves histological elements. When once these elements pass the confines of the cervix they invade the pelvic tissues in such a manner that their detection and complete removal is practically impossible. Thus the carcinoma cells may not only be deposited in any of the lymph glands of the pelvis, but they may indeed grow along the lymph radicles themselves, as described by Mackenrodt, H. W. Freund and Russel. Ernst has shown that the malignant cells also invade the nerve sheaths.

If, therefore, all the glands of the pelvis could be extirpated in the radical operation for carcinoma of the cervix, there would still remain the lymph radicles. Olshausen, Hofmeier, Van Ott, Richelot, Carstens and Jordan believe that no operation for carcinoma that has extended beyond the cervix can be complete enough. Some operators (Kroenig¹) believe that if the grossly diseased parts (enlarged pelvic glands and parametrium) are extirpated with the uterus the carcinoma cells remaining behind in the lymph radicles, etc., may be destroyed.

*Read before the Philadelphia County Medical Society, Dec. 23, 1903.

If, however, one would confine his attempts to the removal of the enlarged glands alone, he should remember that some of the enlarged glands in uterine carcinoma are not carcinomatous, and, on the other hand, some of the diseased glands are normal in size.

Zweifel² and Schauta³ are inclined to look upon carcinoma of the uterus as analogous to carcinoma of an abdominal organ, and to regard extirpation of the pelvic glands as offering little hope for cure.

It is many times impossible to say from clinical means whether there has been any extension of the carcinoma into the parametrium. Kundrat, whose work will be described more fully later, found that even in the absence of induration there might be invasion of carcinoma in the parametrium, and, *vice versa*, that induration itself, if present, might be due to inflammatory reaction of the paracervical tissues.

It is probably the consensus of opinion that unless carcinoma of the cervix is strictly confined to the limits of the cervix, the prospect of cure, even after the most radical procedure, is very small. Although the advanced radical operation for carcinoma is still too young to speak definitely of its success or failure, it is only reasonable to suppose that its application does result in less recurrences than did vaginal hysterectomy; this is true because by a wider resection of the pelvic tissues there is more chance of extirpating all of the carcinoma cells. It is needless to say, that if in any given case one could determine absolutely that the disease was confined to the cervix, vaginal hysterectomy or even amputation of the cervix would do quite as well as the most radical operation. The keynote to the possibility of curing carcinoma by surgical means lies in its early recognition. One has only to observe how often the disease comes to the surgeon after it is inoperable. Statistics concerning the percentage of operable cases are misleading, because different surgeons recognize different bounds of operability, and this is especially true since the development of the modern operations.

Kundrat⁴ an assistant of Wertheim, who advocates the extensive radical operation, has examined the parametrium in eighty cases of carcinoma of the cervix which were operated upon at Wertheim's clinic. His results afford a reliable opinion as to the operability of these cases, assuming that they are

inoperable when once the growth has extended beyond the cervix. In but thirty-two of these eighty cases were the parametrial and glandular structures of the pelvis found free from carcinoma.

In reaching this conclusion Kundrat examined the parametrium and glands of each case in serial sections, examining for this purpose 21,000 preparations.

The percentage of operability, therefore, in Wertheim's cases of carcinoma of the cervix is forty—assuming that after the disease has advanced beyond the cervix the case is hopeless. These figures of Kundrat may be accepted as being nearly correct. He says in his paper that every case at Wertheim's clinic is operated upon whether the disease is far advanced or not. But there must be some advanced cases in which the radical operation would be unjustifiable, so that we may regard Kundrat's percentage of operability as somewhat high. It would seem true, however, that the actual operability of cases of carcinoma of the cervix does not exceed forty per cent.

If results in the surgical treatment of carcinoma of the uterus are to be improved the number of operable cases must be increased, for it is in these alone that there is any reasonable hope of cure. An early recognition of carcinoma is, therefore, of prime importance. There must be an early stage in every case of carcinoma in which it might be recognized by using the means at our command.

Israel,⁵ who recently discussed the etiology of carcinoma, concluded that its origin was directly related to the biological properties of epithelium. After the embryological development of the epithelial or endothelial covering, the cells remain inactive except when their multiplication is necessary to cover some area that has become bared. More proliferation than is necessary to make up for the defect is common.

So long as the epithelial proliferation and the connective tissue remain proportionate the growth is benign hyperplasia (condyloma acuminatum); but if the proliferation of the epithelium is greater than the resistance offered to it by the connective tissue, the epithelial cells penetrate the lymph spaces of the latter and we have the beginning of carcinoma.

The incentive to such a proliferation of the epithelium is analogous to the procreative activity that is observed in the

lower forms of life when they are exposed to difficult conditions of growth. For example, a destruction of some of the epithelial cells upon a surface results in an increased activity of those remaining in an endeavor to replace the defect. Through repeated trauma, which results each time in proliferation of the epithelium, a condition is finally reached, in which, from the more or less continual irritation, the cells take on an abnormal activity of growth. In this light carcinomata cannot be looked upon as infectious growths; they are rather the result of repeated epithelial insults produced by chemical or mechanical means, and perhaps, indeed, by the irritative action of micro-organisms.

Although the etiology of carcinoma is not plain, Israel's views seem to be well founded. The manifest relation between cervical injuries and carcinoma need not be discussed. As for the parasitic nature of carcinoma, the burden of proof still rests with those who would account for it in this way.

Recognition of the earliest epithelial invasions in carcinoma, involving as it does histological elements in histological proportions, depends, I believe, upon histological methods.

It has been repeatedly urged that carcinoma of the cervix may as well be recognized by clinical means as by histological examination of excised tissue from the cervix. It is true that in advanced cases the microscope usually but serves the purpose of confirming the clinical diagnosis. During the past three years in Dr. Clark's service at the University Hospital, the diagnosis of cervical carcinoma has never been made by histological methods alone. In every case sections were taken and examined microscopically. This served to confirm the clinical diagnosis in well-marked cases or in strongly suspected ones settled the question one way or the other. This histological examination has several times prevented hysterectomy that would have been considered advisable in the absence of the help afforded by the microscope.

In no case, however, in which the clinical diagnosis was carcinoma has the histological examination failed to agree. And in no case so far has the microscope discovered carcinoma of the cervix where it was unsuspected. But it must be remembered that cases which find their way to the wards of a hospital are usually advanced cases. Kundrat's percentage of

forty must be looked upon as high. Furthermore, hospital cases usually fall into the hands of men who have had abundant opportunity in the differential diagnosis between benign and malignant affections of the cervix. One who is thoroughly familiar with the disease can diagnose carcinoma about as well by clinical means alone as the physician can recognize phthisis. A mistake in diagnosis by clinical means alone would doubtless be infrequent if all women with atypical discharge or hemorrhage could be immediately placed in the hands of a specialist.

With the average physician, who sees comparatively few cases of carcinoma of the cervix in his experience, an early diagnosis must of necessity be many times more or less problematical. It is in such instances that histological examination would be especially valuable. Outside of large cities there are many difficulties at times in securing the services of a consultant. The patient may feel indisposed to travel a long distance to have a consultation, and the expense of doing so, together with the objection which most women have to an examination by any other than their own physician, would often, I think, make the physician loath to advise this course strongly unless he was nearly certain of his diagnosis. Curettage and excision of portions of cervical tissue in such cases could be readily undertaken and the specimens submitted to a competent pathologist. In this way many cases of cervical carcinoma would be discovered in their incipency. What has been said about my own experience with cases of Dr. Clark at the University Hospital, of cervical carcinoma, in no way casts doubt upon the value of the microscope. We unfortunately do not see these cases as a rule early enough to make the diagnosis entirely by histological means.

In carcinoma of the fundus there is a somewhat different problem. Here the parts are less accessible to the finger and to the eye. Many have argued that even here carcinoma gives indubitable clinical signs which are sufficient for a diagnosis. In a large proportion of cases this is true. But, on the other hand, there are many times when a benign condition may so closely resemble carcinoma as to be subjected needlessly to a radical operation, and there are cases of early carcinoma of the fundus which would never be diagnosed by clinical means alone.

In a previous paper⁶ I reported two cases in which, although

the physical signs pointed to carcinoma, microscopical examination of sections from the cervix and particles curetted from the uterus showed their benign nature. Without the assurance given by the microscope in these cases, the clinician would not have been justified in refusing to perform hysterectomy. One cannot afford to temporize in suspected cases. The diagnosis must be made at once. How often carcinoma has become hopelessly incurable while the effect of palliative treatment was being observed in an effort to establish the diagnosis! A case of Dr. Clark furnishes a very instructive example of a diagnosis made upon the histological examination of scrapings from the uterus. The clinical symptoms were not only negative, but, indeed, strongly indicated a benign process.

The patient, a single woman, aged 53 years, had complained for nearly a year of profuse bleeding at the time of her menstrual periods, which were undergoing the irregularity characteristic of the menopause. Pelvic examination showed a virginal condition of the external genitalia and cervix. The uterus was small, even rather undersized, and the adnexa were normal. Curettement was performed and the scrapings examined as a part of the regular routine following all curettements. I found in these scrapings an adenoma malignum beginning to undergo carcinomatous degeneration. The report was sent to Dr. Clark, who had some difficulty in convincing the family physician that hysterectomy was necessary. The case had seemed so undoubtedly benign at the time of the curettage that the family had been assured that no further treatment would be required. Under some lingering doubt hysterectomy was performed. Even after removal of the organ there was not the slightest indication that it was the seat of a malignant growth. A small fibroid nodule was found embedded in the cervical wall, and this was enough to explain the metrorrhagia. After the uterus had been opened, however, there was no doubt as to the correctness of the histological diagnosis.

One such case as this justifies the routine histological examination of cervical tissue or curettings in the face of a hundred cases in which such an examination proves to be unnecessary. Bearing these facts in mind, the physician should employ the microscope in all cases of metrorrhagia in which the diagnosis is not entirely plain. After every amputation of the cervical

lips the excised tissue should be routinely examined to detect whether a malignant has been mistaken for a benign process. In cases strongly suspicious of carcinoma a positive diagnosis can be made while the patient is under ether; so that if a malignant growth is found, hysterectomy may be immediately undertaken. Suitable sections for diagnosis can be prepared in fifteen minutes by means of a freezing microtome. It should be remembered that the cervical tissue excised for diagnosis ought to be a section through the entire suspected area; diagnostic curettage must include every part of the endometrium. Many times a failure of the microscope in these cases is to be attributed to insufficient material.

Excised portions of the cervix or curetted particles of endometrium should be placed for preservation in four per cent formalin; tissues improperly preserved are also unsuitable for a positive histological diagnosis.

Winter⁷ recently estimated the percentage of cases coming to his clinic in which the disease had not invaded the parametrium. In 240 cases he believes forty per cent were operable in the sense in which the term has been employed in this paper. He believes every case would be operable if it was taken at the first onset of symptoms. In order to increase the percentage of operability he advocates calling the attention of physicians and midwives to the proper course in every suspicious case. Every physician should be urged to pay the closest attention to any suspicious symptoms occurring in the child-bearing woman about the menopause, and to take every means at his command to determine at once if there is any possibility of malignant disease.

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SOCIETY PROCEEDINGS.

CLINICAL SOCIETY OF THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

Stated Meeting, held February 1, 1904.

The President, Dr. James Hawley Burtenshaw, in the Chair.

GASTROPTOSIS.

Dr. W. V. V. Hayes showed a patient, a woman of 38 years of age, who first came under his observation three years ago, suffering from gastroptosis. She gave a history of severe gastric pain, which ran through to the back, coming on after eating and lasting for two or three hours. She vomited frequently, and was unable to obtain relief until the stomach was empty. Eructations of gas, anorexia and constipation were marked symptoms. The stomach, on examination, proved to be sensitive to the touch, and was displaced downward about the width of three fingers, as shown by the position of the lesser curvature. The functional signs revealed an adenasthenia gastrica, there being no free HCL and a total acidity of only 20. Tincture of nux vomica and fluid extract of condurango were administered. (Incidentally, in the course of treatment, she was relieved of a tape worm). The Vanvalzah-Nisbet bandage was applied to the abdomen. This bandage reverses the action of the ordinary corset and pushes the stomach upward and backward. Occasionally the use of a supporting bandage produces a decided change in the position of the stomach, but ordinarily this can hardly be expected. There was a distinct improvement in the condition of the patient. She had gained several pounds in weight, which doubtless helped to keep the stomach in better position. Her general condition was much improved and there had been practically no symptoms for three months. The supporting belt was no longer required.

She was given solutions of bicarbonate of soda and tartaric acid, about a minute apart, to demonstrate the improvement in the position of the organ, which was found to be two fingers' breadth higher than when originally observed.

ATROPHIC GASTRITIS.

This patient, a man of fifty years of age, was also presented by Dr. Hayes, who first saw him in 1897. The patient then gave a history of having suffered for about a year from vertigo, nausea, regurgitation of food and expulsion of gas three hours after eating, his appetite was poor, and there was a tendency to diarrhea and extreme nervousness. He had been moderately addicted to the use of alcoholic drinks, and had taken large amounts of strong medicines. He was treated for syphilis in 1890-1891. Analyses of the stomach contents during the past six years gave practically the same results. The total acidity ranged from 6 to 10. No free hydrochloric acid was found. Ferments were absent, but mucus was always present. The condition was one of atrophy of the mucus membrane. The speaker said that there had been very little change in the condition of the patient and there would probably be very little, so long as the motor function of the stomach was retained and the intestinal compensation maintained, but if these should fail very little could be done to help him. During the six years the stomach had practically done nothing except to pass the food onward. This patient demonstrated how a person with atrophic gastritis may live for a long time in comparative good health.

Dr. Morris Manges opened the discussion of the second patient presented by Dr. Hayes. He called attention to the statement which had been made in the presence of the patient that large quantities of the iodides which the man had taken were probably responsible for the atrophic gastritis. The speaker said that in his opinion atrophic gastritis was one of the most complex and least understood of all diseases of the stomach. There is no positive evidence as to whether it comes from the mucosa or the submucosa further down. It is known that cases of pernicious anemia exist and are associated with atrophic gastritis. The exact pathological classification is unknown. As regards the influence of strong medicines in the causation of gastritis, it may occur as well in the late stages of alcoholism, but that is an entirely different picture. Atrophic gastritis is largely due to changes in the portal circulation, secondary to changes in the liver itself, and there is a clear dis-

tion in the etiological elements of the cases, and subsequent changes have nothing whatever to do with the disease. Many syphilitics have had larger doses of iodides than the patient under discussion, and no atrophy resulted, but the patients derived the greatest benefit from this medication. The speaker said he prescribed for all cases of atrophic gastritis 5 to 7 minims of hydrochloric acid at each meal, for the remainder of their lives, and thought that this treatment and the motility of the stomach were the chief factors in the disease.

DERMOID CYST.

Dr. James P. Tuttle showed a very unusual specimen of a dermoid cyst. There was practically no history until the day previous to the operation, when the patient, a girl about eighteen years of age, went to the office of her family physician and complained of difficulty in making her bowels move, and excessive pain when they did move. She was given an enema and a laxative. The next morning she had a chill. Examination then revealed a tumor in the left inguinal region about the size of a small orange. Her temperature was about 100 degrees F. Three hours later the tumor had apparently increased about two-thirds in size, and the girl's temperature was 102 degrees F. Dr. Tuttle was called in consultation and found her with a temperature of 102 degrees F., inability to move her bowels, and a fluctuating mass in the left iliac region and in the recto-sigmoidal juncture. His diagnosis was hematoma. The following day her pulse was faster and there seemed to be hemorrhage, so the vagina was opened through the posterior cul-de-sac, and about six ounces of clear, serous fluid was evacuated. Passing his hand further up, a large tumor was found, and the operator, supposing it to be an abscess, poked his finger through a rent in the apparent capsule, and fluid gushed forth, which, on bacteriological examination, proved to be filled with fat. Inside the capsule was a tumor, which was removed through the vaginal opening. On one side of the tumor were four protuberances, just in line. This mass, which was on the left side, was attached by a pedicle to the posterior surface of the right lobe of the liver. The tumor had apparently been lying in the posterior cul-de-sac and the hemorrhage pushed the tumor up to the position in which it was found at the time of operation.

Dr. J. Riddle Goffe said that Dr. Tuttle's specimen was a remarkable one. These masses are commonly found in connection with the ovaries, and the more he thought of the development of a dermoid teratoma, the more inclined he was to believe that it was necessary for some form of degenerate conception to have occurred previous to their development. However, in the specimen under discussion, this was probably not true, as the patient was a young girl, and Dr. Tuttle said that both ovaries were present and absolutely undisturbed. It seemed that one might trace a faint outline of a fetal mass, the larger projection at the top of the mass representing the head, two projections lower down for the shoulders and arms, and two at the other end for the lower extremities.

VESICAL CALCULI.

Dr. E. L. Keyes, Jr., presented a large number of specimens of vesical calculi, and gave a most interesting talk on the formation of these stones, the differences in their composition and appearance and the procedure by which they had been taken from various patients. He said that the first interesting feature about stone in the bladder is the different varieties that occur and the manner in which they may be distinguished from each other. If the bladder is opened and the specimen taken out whole, the stone presents one picture, and if it is crushed and sucked out through the urethra, the picture differs. The first specimens shown represented stones under the two forms.

The first distinguishing characteristic of these calculi is that they are either primary or secondary. The primary stone forms itself for no reason that can be recognized; the secondary stone is formed by the inflammation produced by the primary stone. While there are a great many different varieties under either head, the chief groups are the oxalate of lime stone, the uric acid stone, and the urate of soda stone. There are many kinds of secondary stones, but they are all modifications of one mixed mass of the various phosphates, and are known as mixed phosphates stones. Among one hundred and fifty stones, all of which had not been examined chemically, the speaker said that, as far as he knew, all were included in one of these four classes.

Specimens were shown representing four different varieties of stone under two different guises. Some were composed of

oxalate of lime, and were very irregular in shape. For this reason they are sometimes known as mulberry stones. The color is not very clearly brought out, but they vary in shade. A urate stone shown at the same time was distinctly lighter in color than the mulberry stone, and the surface of the former was much more regular, but not entirely smooth. The phosphatic stone is smoother and somewhat resembles white agate in appearance. In the crushed specimens the color is much the same as in the whole stones, but is more distinct. The primary stones are all distinctly darker than the secondary phosphatic stones. Very frequently uric acid and urate stones are mixed in one deposit. Both have a distinctly reddish hue, as compared with the brown of the oxalate.

A point worth noting is that the secondary stone sometimes forms as the result of inflammation caused by the primary stones; consequently in many secondary stones the beginning is primary, and the primary stone rolls about in the bladder, cystitis results, and changes occur in the alkaline urine, which throws out phosphates which are deposited on the primary stone. The speaker showed one stone which had existed for many years as a primary stone before it developed a phosphatic covering. The proper bacteria were not present to render the urine alkaline; a cystitis must have been present for many years before it became alkaline. Another specimen was an oxalate stone through which peaks of oxalate showed through the deposit of phosphatic covering. One great English authority, Dr. Morris, places the percentage of uric acid kidney stones as high as ninety-five percent: in other words, of the many phosphatic stones removed from patients, the greater number are formed under nuclei of uric acid stones.

The speaker next showed the largest stone in his collection, which was taken from a man thirty-six years of age. The stone had existed for thirty-five years when the patient went to to Bellevue Hospital in 1860. A diagnosis of cancer of the bladder was made, and he died without an exploratory operation, exploratory laparotomies not being as common then as now. At an autopsy a stone thirteen ounces in weight was discovered, which was unquestionably the cause of death. The interior of the stone is oxalate, covered by layers of phosphatic deposit. In the oxalate stone the outside and inside

are "bumpy," so to speak, and there is no regular formation, while in a uric acid stone in the collection there are systematic thin layers, one upon the other.

The shape of a calculus is sometimes interesting, but not important, perhaps. The stone generally takes the shape of the cavity in which it lies, in a general way. All the stones are concentrically formed. There is a nucleus of what may be termed a "foreign body"—either an actual foreign body or formed from the salts of uric acid. Layers of the same substance or of a new substance keep forming, and in a general way there is a roundish shape, with the exception of the oxalate stone, in which, in certain cases, the nucleus is not central. The speaker showed several stones which had formed upon nuclei of actual foreign bodies. One or two had formed upon the ends of catheters which had broken off in the bladder, and one especially interesting specimen which had formed on the end of a hair. The patient developed a tumor with a hairy surface, and the inflammation thus set up caused a cystitis with alkaline secretion, and phosphates were thus deposited on the hair. There were thirty-one small stones, each formed in the same manner, at the end of a hair.

Dr. Charles H. Chetwood presented two specimens of vesical calculi which he thought of special interest in connection with the general consideration of the subject by Dr. Keyes. The first specimen presented had been removed from a three-year-old child about a week previously in the clinic. The size and compactness of the specimen were such that he thought it probably a fetal formation. The diagnosis was made with a silver probe, with which he touched the stone without difficulty. A suprapubic incision was made and the stone removed. It weighed 5.44 grammes. The patient has a suprapubic fistula, which the speaker thought would heal in a few weeks. The other stone formed upon a broken-off catheter, and was removed from a patient 72 years old who had an enlarged prostate. It weighed 10.44 grammes and was composed of triple phosphates and ammonium urate. The catheter nucleus was broken off in the bladder some three years before the calculus was removed.

CYSTIN CALCULUS.

Dr. Manges showed a cystin calculus which he thought particularly interesting because there are probably not more than

fifteen specimens in the entire world. The stone, which weighed fifty grains, was passed spontaneously by a boy twenty years of age. The patient disappeared, so that no chemical analysis could be made. These stones are closely associated with a putrefaction which goes on in the intestines and are excreted in the urine as well. This disease often occurs in families, but the chemical analysis is unknown.

Dr. Manges showed two specimens of renal calculus, and the kidneys from which they had been taken. A patient who was operated on for the relief of difficulty in secretion of urine died, and upon examination it was found that extreme atrophy of the kidney had resulted from the impaction of a stone in that organ.

The second specimen was a very good demonstration of the stone in situ. A very large kidney had been packed with stone, which had in time caused a hydronephritis. At the lower end of the specimen, part of the kidney could be seen beyond the pelvis, showing what extensive changes may be produced by the long residence of stone in the kidney.

X-RAY DEMONSTRATION OF STONE IN THE URETER.

Dr. Albert Kohn presented an X-ray photograph of a patient who had suffered from attacks of colic for fifteen years. His symptoms were relieved by hypodermic injections of morphine. After one of these attacks he had a chill, and the diagnosis of "surgical kidney" was made and a surgeon called. The patient was removed to a hospital, where he could be watched for confirmation of the diagnosis, and three days afterward he developed a second attack and one week later a third attack. An exploratory incision was made into the kidney, and no stone was found, but there was an acute infection. This wound barely healed when the patient had another attack of colic, followed by a chill. The surgeon went in from below and catheterized the ureter and found what he thought was a stricture. The patient was sent to have an X-ray photograph taken and fortunately the stone lay directly in line with the photograph. The surgeon cut down on the ureter and removed the stone.

RENAL CALCULUS.

Dr. J. Riddle Goffe presented a specimen of renal calculus removed by him from a woman aged 40 years, who was sent

to him for operation for ovarian cyst. She had suffered from severe pain, from chills and fever, for about six months, and was treated for malaria. Her urine had been examined several times and no pus had been found. Upon examination it was found that she had a large tumor, which had no connection with the pain, and upon opening the kidney a large stone was discovered, which blocked the passage. It was removed without difficulty and without opening the ureter.

The speaker said that the specimens of calculus growing upon the end of the hair, showed by Dr. Keyes, recalled to his mind a patient, a female, aged 45 years, who several times a year, plucked tufts of gray hair from her anus. It always reappeared in a few months. She had a tumor, and on operating a large dermoid cyst was found, and over the pelvis it had lacerated through the rectum and the rectum had closed around it. This was the origin of the tufts of hair.

Dr. F. M. Jeffries said it is impossible to give a definite explanation of the etiological factors in the formation of these calculi. A number of theories have been advanced. One thing is certain; three factors must be present before calculi can be formed: 1. The chemical constituents of the urine; 2. nidus; 3. a substance capable of entering into and making a stroma. It is true that two substances at least manifest in themselves a cohesive power, as seen in uric acid of roseate crystals and in calcium oxalate where the crystals are found in rare spherical and dumb-bell shapes. The reaction of the urine will control the kind and variety of stone that is formed, an acid urine allowing only those to form that are insoluble in the acid, and an alkaline urine causing those that are insoluble in alkaline. As regards the nidus, Dr. Keyes had shown a number of specimens in which it was crystal; what forms on that afterward depends on what takes place in the bladder. One substance which Dr. Keyes did not mention, which is sometime found forming the nidus, is a blood-clot. A peculiar feature regarding the formation of calculi is that they are particularly liable to occur in particular, definite, fixed localities, while territories in the close vicinity may leave their population comparatively free from this affliction. This led to a strong opinion that the variety of waters might have something to do with their formation, but investigations on this line have not thoroughly satisfied those who adhere to this theory.

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EDITORIAL.

THE EXTRA-GENITAL CHANCER.

This is a lesion which is very interesting to the syphilologist and more so to the student of medicine. But it is full of interest and importance to the general practitioner, more especially to him who is located at a distance from a large centre of population and whose practice lies among those who have no idea of what a venereal disease is or who have never heard of the "social disease," as Dr. Morrow has very aptly designated it. And it is these who should make a particular study of syphilis from the fact that it is very prevalent in those districts which are remote from the larger centres of population. If there be one a victim of syphilis it is hushed up, and if his physician has perchance recognized the disease it remains a secret; he gets married and his wife innocently bears a brood of children suffering from congenital syphilis, the nature of the disease remaining unknown until some specialist in a large city

lays his finger upon the festering spot. Thus it is that syphilis in some cases will become disseminated among individuals living under the best hygienic conditions, who are endowed with otherwise good, healthy constitutions, and become the foci of one of the greatest scourges of humanity. Too many practitioners rely upon this supposed knowledge of their clientele and will not even think of the possibility of one being infected by the luetive taint when it is but too notorious that many of them come to the city secretly to be treated for their troubles.

But it is not of this that we intend speaking; it is rather of those cases which are puzzling even to the city physicians who have not had an experience such as that enjoyed by syphilologists. The latter are always on the lookout, where the others do not think of the matter, and as a natural consequence they discover those things which entirely escape the observation of the former. The syphilologist remembers the dictum of Ricord, "If there be a syphilitic eruption, look for the chancre and you will find it." And to continue the sayings of this master of syphilology, "When you find a chancre, look for the indurated glands which follow it as surely as the shadow does the body projecting it." There are but too many who have neglected these teachings which are certainly sound in their advice. The physician who notes a syphilitic eruption and knows it will find the chancre, and he must not stop his search for it until he finds it; and in many instances he will be rewarded by the discovery of an extra-genital chancre which has been treated for something else under the mistaken idea that the patient could not have anything of the kind or that it was some other lesion of a very stubborn character. Such cases have been so numerous that it would be a mere waste of time to attempt to enumerate but a very small portion of them. Everyone almost can recall one or several coming within his experience.

Our readers will certainly see the usefulness to themselves and advantages to their patients, who may have been so unfortunate as to contract syphilis, of making the proper diagnosis and giving the proper treatment for the disease which has been diagnosed. Let them discard the false idea that any one is not liable to be syphilitic, for a reading of Bulkley's work on "Syphilis in the Innocent" will show them how a chancre may be acquired in the most innocent way mediately or by actual

contact, and extra-genital chancres transmitted to those certainly above all suspicion. There is no social condition, age, or other circumstance which renders any one immune, and the fact that an extra-genital chancre exists does not argue against the virtue or probity as well as innocence of its carrier. It is but too often that a child or a *virgo intacta* becomes the bearer of the primary lesion of syphilis who when informed of the nature of the disease is as ignorant as before it appeared. The great trouble with many lies in the fact that they argue depravity as a natural concomitant of syphilis and cannot imagine that a syphilitic can be innocent although afflicted with the disease. They would argue with equal truth that an infant with hereditary syphilis has been guilty of depravity. The conditions surrounding every case must be taken into consideration, and everything in connection with it be fully weighed before any conclusions are arrived at or opinions given.

Of course, some cases point to total depravity, but they are exceptional and easily recognized. They are dangerous as they are the most active factors in disseminating the disease. These are easily recognized and are fit subjects to be warned in their meteoric career of crime. We will not continue the subject at this time, but may revert to it on some future occasion when it seems more propitious for the pursuit of the subject.

AMERICAN MEDICAL ASSOCIATION MEETING.

This national medical event will take place at Atlantic City, New Jersey, June 7, 8, 9 and 10, 1904, and it promises to be a record breaker both in point of attendance and in the value of its scientific contributions to medicine. It will afford our Eastern brethren ample opportunity to read papers and to add their by no means slight contributions to the general fund of medicine and surgery, which is invariably furnished by the members of the Association. This is not meant to say, of course, that the West will not contribute its contingent and, if we are to judge from present indications, it will do its full duty to a man. Atlantic City is delightfully situated on the Atlantic coast and is singularly free from Jersey mosquitoes, so that this latter

need not act as a deterrent to prevent any one from attending. We are sure that all those who have visited this pleasant summer resort will jump at the opportunity of going there once more. It is as good a place as any that could be chosen to hold a meeting and we have no doubt that every member of the Association will be glad that he went there. The accommodations are good and ample and the Committee of Arrangements has so managed affairs that the prices will be moderate. In fact, everything has been arranged in such manner that every one will be made to feel pleasant and comfortable.

What will be one of the chief sources of comfort and gratification in attending this meeting will, no doubt, be traveling on the Baltimore and Ohio Southwestern Railway, which will have trains to Atlantic City without change. At the present writing the fare will be one and one-third the regular rate on the certificate plan. The rate is as low as any road can furnish, but the service is superior to any. All delegates west of the Mississippi River should see to it that their railroad tickets are made over the B. & O. S-W., and we are certain that those from St. Louis, and they are not few, will go over the only line which can serve them in a proper and efficient manner. We can heartily recommend this railway line and can invite all our readers to choose it as their medium of transportation to Atlantic City.

The Danger of Administering Sodium Chloride to Patients with Bright's Disease or Cardiac Affection with Threatened Anasarca.—M. J. Courmont recalls the fact that the equilibrium of molecular "isotonia" in the system is maintained by the elimination of ingested salts by the emunctories, these salts having become hypertonic attract the watery part of the serum and cause edema. When, therefore, the kidneys become impermeable to sodium chloride, this substance passes into the tissues and causes edema. Hence, if a patient have reached the stage of dropsy it is dangerous to let them take salt unless the kidney eliminates it. Injections of artificial serum may thus become elements of great danger.—*Med. Record.*

BOOK REVIEWS.

Precis d'Urologie Clinique, PAR AUGUSTE LETIENNE et JULES MASSELIN. 8vo, pages 463. Avec 58 figures et une planche hors texte. [Paris: C. Naud, 3 rue Racine, 1904. Prix, 12 francs.

MANUAL OF CLINICAL UROLOGY. By Auguste Letienne and Jules Masselin. 8vo, pp. 463. With 58 figures and one plate. [Paris: C. Naud, 3 rue Racine, 1904. Price, 12 francs.

There is quite a number of standard works published in English on the subject of uriology, and many have gained a place for themselves which has earned for them a lasting position among those which shall ever be regarded as reference works. No one there is who will deny the importance of the subject in view of the great and recent advances in the art of scientific diagnosis and rational treatment. It is for this reason that every new work is read with interest, and when it so happens that the subject is considered along new lines an added interest is brought to the subject. It is, in great part, to this latter cause that we must attribute whatever new interest may be felt in the subject as developed in the book before us. The new point is one out of the ordinary and the matter has been treated in a masterly manner by the authors of this, one of the latest, products of the French medical press.

According to the authors, urology is a complex biologic science and it cannot be looked upon as belonging exclusively to chemistry. The clinical analysis of urine stops at ponderable results. From a purely clinical point of view what significance are we to grant to it? What benefits may clinical medicine derive from it? What importance and what significance are we to attribute to abnormal urinary elements? is a question to which the authors of this work endeavor to make a response and furnish a satisfactory solution. The book is not a small manual of chemical urology, but rather a treatise on abnormal urine as viewed from a chemical, anatomical and biologic point. It is a work which enters into a consideration of the subject in a thorough and almost enthusiastic manner. It is a work which may be consulted not alone for the general data, but for the more minute points in connection with urology. In fact, it is a complete work without being prolix, and it is thorough without being tiresome. We very much regret that there is no English translation, for we are convinced that such an one would immediately spring into favor with the English reading members of the medical profession.

The book before us contains all those facts in anatomy, physiology, histology, and pathology which may be useful to anyone who wishes to know urinary biology. There is given a methodical description of the most reliable and certain ways of dosage as well as the latest and most practical. Urinary biology is taken up and urinary microbiology which today tends to assume such a great importance in the history of the diseases of the urinary system. It describes the latest methods of exploration of the kidneys, of the ureters, etc.

The book is divided into four parts. Part I. is devoted to the anatomy of the kidneys and to the normal urine in adults and in children. In Part II. we are given a thorough discussion of pathological urine, including calculi. Part III. contains descriptions of the clinical methods employed in exploring the kidney. The concluding portion, Part IV., deals with the bacteria and parasites of the urine. This is a highly interesting part. The illustrations are all good, and the plate of spectra of oxyhemoglobin, reduced hemoglobin, urobilin, and biliary pigments is excellent and well made. The entire work is well printed on excellent paper, and will make a useful addition to any medical library.

Subjective Sensations of Sight and Sound, Abiotrophy, and other Lectures. By SIR WILLIAM R. GOWERS, M.D., F.R.C.P., F.R.S. 8vo, pp. 250. With eighteen figures. [Philadelphia: P. Blakiston's Son & Co., 1904. Price, \$2.00 net.

Any one who has read the lectures of Gowers knows that they are all interesting and full of information as well as of the most useful data. In the present volume we are given lectures which have been separately published in medical journals but have undergone a revision by their author. We can not imagine any physician not being interested in their reading, and the author certainly can not be accused of threshing old hay for us in his lectures. He certainly presents his subjects in a new light and one that is strong and makes all things clear. The first two lectures on Subjective Visual Sensations and Subjective Sensations of Sound are of the highest value to all those engaged in the study of medicine and more particularly to those who treat diseases of the eye and of the ear. To these latter there are many things of the highest importance as well as of usefulness. Abiotrophy: Diseases from Defect of Life is a well considered dissertation which trenches somewhat on heredity and takes up the subject of defect of life in organs and tissues as explaining many phenomena daily observed and giving rise to neither ordinary interest nor a desire to seek for an explanation therefor. The author certainly handles this subject in a most interesting manner.

Myopathy and a Distal Forum is a clinically useful lecture, and equally so is the next lecture on metallic poisoning. In this he speaks of but two metals, lead and arsenic, but very justly points out possible errors in diagnosis due to certain symptoms observed. Syphilitic Disease of the Nervous System is a subject which permits the author to show his true power in the knowledge he possesses of the nervous system, and the particular effects produced by the luetic disease. One of the most striking lectures is that entitled, Inevitable Failure; A study of Syphilitic Arterial Disease. He thoroughly analyzes a case, giving the true diagnosis but with unsuccessful treatment, which leads him to say that diagnosis without treatment is "thistledown without seed." His entire lecture is one well worthy of study and consideration. Syringal Hemorrhage into the Spinal Cord and Myasthenia and Ophthalmoplegia are well considered lectures dealing with particular subjects in neurology. The concluding lecture on the Use of Drugs is a medico-philosophic one, and in this the author endeavors to point out the resemblance of the most innocent to the most dangerous drug, the varied action of drugs on different portions of the nervous system, and draws conclusions concerning the potentialities of drugs, reasoning from the very small portion of whatever we know of their action. We will not continue as the name of Gowers is certainly sufficient in itself to constitute a guarantee that his lectures are of the best.

Infant-Feeding in its Relation to Health and Disease. By LOUIS FISCHER, M.D. Third edition. 8vo, pp. 357. Containing 57 Illustrations, with 24 Charts and Tables, mostly Original. [Philadelphia: F. A. Davis Company, 1903. Price, \$2.00 net.

A book which receives a call for a new edition within six months after the appearance of the preceding one should certainly be reckoned a success, and this is exactly the treatment which has been accorded the one before us. This has been due to the fact that it is both well written and practical. That the present one will prove a success we do not doubt, more especially when it is considered that the book has undergone a careful revision and that many chapters have been added, notably one on "Infant-Feeding in Summer Complaint." This alone should make the book much sought after as the deaths of infants from this affection are such that the number is appalling. The author has very judiciously hearkened to the words of the reviewers and acted upon their criticisms, with the result of the most excellent and improved book before us. We can readily note the improvement, and those who have occasion to use it as a guide will find that it is more reliable and trustworthy than it ever was, albeit it was a most excellent guide.

The author deals very thoroughly with milk in all its aspects. Cow's milk he insists upon being thoroughly pasteurized and it may be said that the whole keynote of the book is asepsis of the food intended for the nutrition of the infant. Artificial foods must be adapted to the purpose for which they are intended and be in conformity with the needs of the infant. Nipples must be thoroughly cleaned and so chosen as to best serve the purpose for which they are intended. The so-called "baby-comforter" is very justly condemned by the author as it is conducive to the provocation of none but ill effects. The book is filled throughout with good advice, and whilst many of the methods are only susceptible of application in maternities a sufficient number is given for use in the home. The book concludes with a dietary which the practicing physician will find of the highest practical use. The different articles of diet which are given, together with directions for preparing them, are good and cannot but act with benefit when their use is under the guidance of a competent physician.

The publishers have made this a well printed book, upon excellent paper and strongly bound. It is one which a physician should always keep in a handy place for ready reference. We cannot recommend it too highly.

Le Sens des Attitudes. Par PIERRE BONNIER. 8vo., pp. 115. [Paris: C. Naud, 3 Rue Racine, 1904. Prix, 3 francs 50.

THE SENSE OF ATTITUDES. By PIERRE BONNIER. 8vo., pp. 115. [Paris: C. Naud. 3 Rue Racine. Price, 3 francs 50.

This is a most interesting study in psychology which the author foreshadowed in his work on orientation. He writes in a dialectic manner on his subject and shows his complete familiarity with psychologic problems. He opens with a chapter on the sense of attitudes. This he follows with the vegetative life, the life of relations, and then takes up the sense of the position of the limbs. Kinesthetic sensations are pretty fully considered and the muscular sense and the sense of space. Direct subjective orientation, indirect subjective orientation, sensorial orientation, visual orientation, auricular orientation, and tactile orientation each occupies a chapter. The stereognostic sense occupies the attention of the author, after which he devotes some observations on irreducibility and reductibility. Psychomotricity is thoroughly considered although but very little space is devoted to it. Distant orientation is spoken of, and the work terminates with psychic orientation. The author so explains every phase of his subject that what at first seemed to be a chaotic mass of words given in psychologic terms soon becomes clear and easily understood by means

of his explanations and proffered examples; so much so, that what at first blush would have been thrown aside becomes interesting and even fascinating.

The author writes a very good French, and he knows how to take advantage of the pliancy and grace of that language. He who knows it will certainly not relinquish the reading of this work until he has completed it and will be tempted to read it again and again.

Report of the Board of Health on a Second Outbreak of Plague at Sidney, 1902. By J. ASHBURTON THOMPSON, M.D., D.P.H., President. Govt. 4to., pp. 80. With two maps. [Sidney: William Applegate Gullick, Government Printer, 1903. Price, 2s. 6d.]

This is a very interesting report, more especially to those who have read on the plague in Australia. The author, who is Chief Medical Officer for the Government, has made a thorough study of the subject and presents his observations and conclusions in a manner of the highest scientific value as well as interest. The report is divided in three parts. In Part I. is given an account of the Epidemic. Part II. deals with the mode of spread; and it is in this part that the author demonstrates his ability in the observation and handling of an epidemic of this sort. In Part III. is considered the epizootic in relation to the epidemic. The author considers the time and place relations, and follows this with notes on general experience with the epizootic. The species of rats affected are noted as well as the mode of infection. Dr. Frank Tidwell makes two contributions, one on the mode of infection and the other on the ecto parasites of the rat, the latter being illustrated by two plates. The report ends with an appendix in which are given date of attacks, adjudged places of infection, and grouping of 139 cases of plague. The whole report is well worthy of study by those who devote any serious study to the problems involved in the preservation of public health.

The Relation of the Cervical Sympathetic to the Eye. Papers read before the Section on Ophthalmology of the American Medical Association, at the Annual Session, New Orleans, May, 1903. 8vo., pp. 119. [Chicago: Press of Am. Med. Ass., 1904.]

This is certainly an interesting little book, more especially to those who have paid any extended attention to the subject. There are four papers embraced in this collection and each one is interesting not alone to the ophthalmologist, but should prove so to the intelligent physician in general practice. Dr. G. E. de Schweinitz writes on the "Pathology of the Sympathetic in Relation to the Eye"; Dr. William H. Wilder on the "Influ-

fluence of Resection of the Cervical Sympathetic Ganglia in Glaucoma"; Dr. James Moores Ball on the "Influence of Resection of the Cervical Sympathetic in Optic Nerve Atrophy, Hydrophthalmias and Exophthalmic Goitre"; and Dr. John E. Weeks on the "Pathology of the Cervical Sympathetic." These papers form a symposium which should certainly make an era in ophthalmic literature. All the papers are above the ordinary in excellence and the names of their authors are sufficiently well known to lead us to expect as much. The paper of Dr. Ball is an especially good one, written in a thorough manner and of more than ordinary value to the ophthalmic operator and physician. All those who are interested in eye diseases should make it a point to have this book.

The Man Who Pleases and the Woman Who Charms. By JOHN A. CONE. 16mo, pp. 131. [New York: Hinds and Noble. Price, 75 cents.

This little book contains much that is interesting and useful. From a reading of it we should judge that the key-note as well as the solution of the problems submitted is "good form," and to acquire this one must come in contact with those who possess this quality in a well developed form. The author has well written on his subject, and we are pleased to note that he insists so much upon thoughtfulness and kindness, two of the most charming graces that can be possessed by man or woman. They will naturally lead to courtesy and confer those qualities of which the author of the little book before us speaks. It is a book which should be placed in the hands of the youth of both sexes.

The Worth of Words. By DR. RALCY HUSTED BELL. With an Introduction by DR. WILLIAM COLEY COOPER. Third Edition, Revised and Enlarged. 12mo, pp. 307. [New York: Hinds and Noble. Price, \$1.25.

This is practically a book on synonyms intended for school purposes. One grave objection we have to it is that there is not enough of it. The author is certainly not an adept in slang and, in our opinion, this portion could have been omitted with profit. It is certainly unnecessary to attempt to discriminate upon the fine differences in the shades of meaning of cant words, for it matters but little to those who use them. Taken as a whole, the book may be set down as an excellent one which will prove of great profit to those who attend school and will aid them much in the acquirement of good English.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

Howe's Handbook of Parliamentary Usage. By Frank William Howe. [New York: Hinds & Noble. Price, 50 cents.

Le Sens des Attitudes. Par Pierre Bonnier. 8vo. pp. 115. [Paris: C. Naud, 3 rue Racine. 1904. Prix, 3 francs 50.

The Man Who Pleases and the Woman Who Charms. By John A. Cone. 16mo. pp. 131. [New York: Hinds & Noble. Price, 75 cents.

Précis d'Urologie Clinique, Per Auguste Létienne et Jules Masselin. 8vo. pp. 463. Avec 58 figures et une planche hors texte. [Paris: C. Naud, 3 rue Racine. 1904. Prix, 12 francs.

The Worth of Words. By Dr. Ralcy Husted Ball. With an Introduction by Dr. William Coley Cooper. Third Edition, Revised and Enlarged. 12mo. pp. 307. [New York: Hinds & Noble. Price, \$1.25.

Subjective Sensations of Light and Sound, Abiotrophy, and Other Lectures. By Sir William R. Gowers, M.D., F.R.C.P., F.R.S. 8vo. pp. 250. With 18 Figures. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$2.00 net.

Infant-Feeding in its Relation to Health and Disease. By Louis Fischer, M.D. 8vo, pp. 357. Containing 57 Illustrations, with 24 Charts and Tables, Mostly Original. Third Edition. [Philadelphia: F. A. Davis Company, 1903. Price, \$2.00 net.

The Relation of the Cervical Sympathetic to the Eye. Papers read before the Section of Ophthalmology of the American Medical Association at the Annual Session, New Orleans, May, 1903. 8vo, pp. 119. [Chicago: Press of Am. Med. Asso., 1904.

Report of the Board of Health on a Second Outbreak of Plague at Sydney, 1902. By J. Ashburton Thompson, M.D., D.P.H., President. Gov't 4to. pp. 80. With 2 Maps. [Sydney: William Applegate Gullick, Government Printer. 1903. Price, 2s. 6d.

The Medico-Chirurgical Journal has adopted an ornate cover in colors which is certainly a great improvement and shows good taste. The subscription price remains at one dollar per

year, and the college of which it is the official organ is certainly to be congratulated upon its offspring. It has been ever improving and we certainly are pleased with this new evidence of its prosperity.

The Colorado Medical Journal devoted its March issue to Pulmonary Tuberculosis and made this its special tuberculosis number. The *Maryland Medical Journal* also issued a similar number, and both these publications will afford a feast to medical readers such as is not usually presented to the readers of medical journals. This method of presenting a symposium on one subject by various authors is being adopted by medical publications and it is certainly a step in advance adopted by medical publications.

Howe's Handbook of Parliamentary Usage is a very handy little book so constructed that any point in parliamentary law and usage may be determined in a moment. This little vade mecum contains 52 pages and about thoroughly covers the subject. In addition to the parliamentary rules it has "hints" which will prove useful to the old as well as the young parliamentarian, and the portion devoted to the qualifications of a chairman is well written. The publishers of this handy little guide are Hinds & Noble, of New York City, who issue it at the price of 50 cents.

Biographie Scientifique.—J. B. Baillière et Fils, 19 rue Hautefeuille, Paris, have issued a general catalogue of books on science. This contains the detailed announcement, in alphabetical order, of the names of about five thousand works on medicine, natural history, agriculture, veterinary medicine, physics, chemistry, technology and industry. In addition to this there is an index of 17 pages which gives the names of the various authors with cross references. This catalogue, which is indispensable to writers and students, will be sent free on application by prepaid answer postal card to the publishers.

The Merging of Two Medical Journals.—Messrs. E. B. Treat & Co., the publishers of the *International Medical Magazine* and of *Archives of Pediatrics*, have concluded to merge the two journals. During the five years that Dr. Boardman Reed had charge of the *International Medical Magazine* it was his constant aim to have the periodical of the highest character, readable and reliable. The publishers regret that they must discontinue the *Magazine*, and extend to Dr. Reed their appreciation of his editorial labors. It is hoped that the friends of the *International Medical Magazine* will continue their interest by reading *Archives of Pediatrics*, and thus extend its field of usefulness.

The above announcement appeared recently in the *Archives* and we very much regret to note the suspension of such a sterling publication as the *International Medical Magazine*. The merger we know will gain strength by the change and will become a better publication than the *Archives* has been, if such be possible. The *Archives of Pediatrics* will retain its name and we do not doubt that it will increase its list of subscribers.

MELANGE.

North Carolina Medical Society.—The annual session of the North Carolina Medical Society will meet in Raleigh, May 24-26, instead of May 31-June 2d, as formerly published. The Board of Medical Examiners will meet May 18, instead of May 25.

Next Meeting of the Mississippi Valley Medical Association.—The thirtieth annual meeting of the Mississippi Valley Medical Association will be held at Cincinnati, O., October 11, 12, 13, 1904. Dr. B. Merrill Ricketts has been elected chairman of the Committee of Arrangements.

The following are the officers of the Association elected at Memphis: President—Edwin Walker, M.D., Evansville, Ind.; President-elect—Hugh T. Patrick, M.D., Chicago, Ill.; First Vice-President—Bransford Lewis, M.D., St. Louis, Mo.; Second Vice-President—Geo. W. Cale, Jr., M.D., Springfield, Mo.; Secretary—Henry Enos Tuley, M.D., Louisville, Ky.; Assistant Secretary—S. C. Stanton, M.D., Chicago, Ill.; Treasurer—Thos. Hunt Stucky, M.D., Louisville, Ky.

The following resolution was offered by Dr. S. P. Collings, of Hot Springs, Ark., at the Memphis meeting:

Whereas, The value of perfect sight and hearing is not fully appreciated by educators, and neglect of the delicate organs of vision and hearing often leads to disease of these structures; therefore, be it

Resolved, That it is the sense of the Mississippi Valley Medical Association that measures be taken by boards of health, boards of education and school authorities, and, where

possible, legislation secured, looking to the examination of the eyes of all school children, that disease in its incipency may be discovered and corrected.

The Position of the Head in Cerebellar Disease.—Posture in relation to disease is a subject which for a long has aroused much interest, and probably from prehistoric times has to some extent guided efforts to relieve distress and directed discriminating observers. And in no group of morbid affections is scientific study of posture of greater assistance than in derangements of the nervous system. In the current number of *Brain*, Dr. Frederick E. Batten seeks to afford adequate answer to such questions as, Is a definite attitude of the head assumed in man in cases of cerebellar disease? Does the position correspond with that produced by experimental lesion, and, if so, can the sign be used as a symptom of diagnostic value? and, Is the position assumed in cases of intracranial disease in which no gross lesion of the cerebellum can be found? The conclusions are not only of interest to neurologists, but likely to be of service to many practitioners. A definite attitude of the head is not infrequently seen in cases of cerebellar disease in man, that position being with the ear approximated to the shoulders on the side opposite to the lesion, and with the face turned up to the side of the lesion. This position of the head, so far as the approximation of the ear to the shoulder is concerned, is the reverse, while the position of the face is the same as that seen after experimental ablation of one lobe of the cerebellum. But as regards its diagnostic value, it has to be admitted that the position is sometimes present in cases in which there is no gross lesion of the cerebellum. Dr. Batten, therefore, indicates that while it may be said that as an additional and confirmatory sign of cerebellar tumor the position assumed by the head is of value, too much importance should not be attached to its presence alone, or when opposed to symptoms which have been shown to possess greater diagnostic value.—*Medical Press and Circular*.

A Tuberculous Iodide of Potash Eruption simulating histologically an epithelioma is described in the February issue of the *Journal of Cutaneous Diseases including Syphilis*, by Dr. Douglas W. Montgomery. The case occurred in a man of 52,

who had always enjoyed good health with the exception of an attack of muscular rheumatism three years before. Three years before he had acquired syphilis for which he received a short treatment. He developed sores afterwards at different intervals. In January, 1903, he came under the treatment of a physician who gave him ten drops of a saturated solution of iodide of potassium three times a day, gradually increasing up to fifty-five drops, but the sores kept getting worse. There existed lesions scattered over the face and limbs, and a great number of white scars that looked like those following tertiary syphilis. The diagnosis was made by the exclusion of mycosis formigoides and of dermatitis coccidioides. The author gives a very good account of his researches, which established the fact that the patient had had syphilis, and the iodide eruption was possibly caused by a difference in the action of the kidneys. An interesting observation was made on the examination of a piece of tissue removed from a lesion on the forehead, many of the pores under the microscope looked exactly like epitheliomatous infiltration. There was the same appearance of connective tissue *loculi*, solidly filled with atypical epithelial cells. A number of photomicrographs are given to illustrate the text. The value of this article to the physician, to the surgeon, and to the dermatologist cannot be over-estimated, and we have no doubt that many a tuberculous iodide lesion has been removed for epithelioma, even after microscopic examination. As the author states: "On looking back over my own experience I believe I made this mistake once myself, and my only consolation is, that in operating on the lesion as an epithelioma, my fee was a great deal larger than if a correct diagnosis had been made."

The Knoll Prize in Bohemia.—The Philipp Knoll prize of 2,000 crowns was awarded for the first time, and not strictly in accordance with the ideas of the founder. It should be attributed to some one of the younger German-Bohemian scientists for the best work done in the last three years. Instead of that, it was divided among Professor Bayer and Dr. J. Langer, for work on congenital hernia and the lymph glands and bee poison, both dating from several years ago, and A. Fischel and O. Bail for recent research.—*J. A. M. A.*

MISCELLANEOUS NOTES.

Dermapurine [Medicated Soap].—Derma Remedy Co., St. Louis, Mo. Gentlemen:—I consider Dermapurine Medicated Toilet Soap the best soap in the market; it contains no free alkalies, is very mild and non-irritating, yet strongly antiseptic and very effective. It is very useful in allaying irritations of the skin in any inflammatory condition. I have prescribed it within the last year in preference to any other soap.

R. Y. HENRY, M. D.

Professor of Physical Diagnosis Missouri Homeopathic Medical College. Lecturer in Clinical Medicine, St. Louis City Hospital.

Listerine First and Foremost in the Field of Liquid Antiseptics.—An editorial foot-note from the December (1903) *Alkaloidal Clinic*: The ancestral foundation of all the liquid antiseptics before the medical profession is Listerine; happy in name, happy in formula, and happy in time of birth. It has been, is, and ever will be, first and foremost in this field. The Lambert Pharmacal Company is to be congratulated on its success.

Chionia in Hepatitis.—When the hepatic cells themselves become atrophic and lose their nerve tonicity, and refuse to respond to nature's mandate of secreting bile, then we have a group of symptoms not unlike those of a diabetic, but the results of which would be quite different.

In this condition we have found nothing that proves itself an ideal more than "chionanthus," and we have an ethical preparation, which you all know, that has proven itself a perfect God-send in this condition, and that product is "chionia." Before the hepatic cells become atrophic and hardened, there is a stage in which the liver becomes engorged, congested, hypertrophic, and in this condition we have hepatitis, an inflammation of the cells and connective tissue, and if this continue then the liver breaks down, atrophies and hardens. Now, chionia does not act like any other laxative or hepatic stimulant, but instead of producing a severe catharsis, it works on the inflamed cellular tissue, bringing back the liver to its former physiological condition, allaying all inflammation, and gently stimulating the hepatic cells to perform their duty. And when we add nux vomica to this ideal hepatic stimulant, we have a tonic for the sluggish liver that cannot be equalled by any other remedy.—*Extract from a paper entitled "Indigestion, an Etiological Factor in Diabetes," read before the Medical Association of South Carolina, by Dr. J. Will McCannless.*

Dermapurine in Eczema.—I have found Dermapurine the most excellent remedy for eczema that I have ever tried in a practice of twenty-five years.

G. W. HELMICK, M.D., Harrisburg, Ohio.

Muscular Soreness and Rheumatism Due to Grip.—In speaking of the treatment of articular rheumatism, Hobart A. Hare, M.D., Professor of Therapeutics in the Jefferson Medical College and editor of *The Therapeutic Gazette*, says: "Any substance possessing strong antipyretic power must be of value under such circumstances." He further notes that the analgesic power of the coal-tar products "must exert a powerful influence for good." The lowering of the fever, no doubt, quiets the system and removes the delirium which accompanies the hyperpyrexia, while freedom from pain saves an immense amount of wear, and places the patient in a better condition for recovery.

ery. The researches of Guttman show conclusively that these products possess a direct anti-rheumatic influence, and among those remedies antikamnia stands pre-eminent as an analgesic and antipyretic. Hare, in the last edition of his *Practical Therapeutic* says: "Salol renders the intestinal canal antiseptic." This is much needed in the treatment of rheumatism. In short, the value of salol in rheumatic conditions is so well understood and appreciated that further comment is unnecessary. The statements of Professors Hare and Guttman are so well known and to the point and have been verified so often, that we are not surprised that the wide-awake manufacturers placed "Antikamnia and Salol Tablets" on the market. Each of these tablets contains two and one-half grains of antikamnia and two and one-half grains of salol. The proper proportion of the ingredients is evidenced by the popularity of the tablets in all rheumatic conditions and particularly in that condition of muscular soreness which accompanies and follows the grip. The Antikamnia Chemical Company, St. Louis, Mo., will send samples to physicians on application. Please mention this journal.

Pennsylvania Pronounces it Wholesome.—Recently a direct effort was made to frame legislative measures which would presumably exclude Vin Mariani from sale in the State of Pennsylvania. The State Board of Health promptly took up the problem. They employed two of the most prominent chemists of Philadelphia, namely, Professor Samuel P. Sadtler and Dr. F. A. Genth, who after critical analyses of Vin Mariani, made from purchases of their own selection, failed to find pure cocaine in demonstrable quantity. This not only refutes the absurd falsity of suspicion that any alkaloid is surreptitiously added to the wine, but confirms, in the most convincing manner the results of numerous former analyses made by the Governments of France, Germany, Russia, and also in the United States. Each of these analyses admits the absolute purity of Vin Mariani as a preparation of true coca leaves in a sound and nutritious French wine. As the Pennsylvania State Board of Health officially expresses it: "Vin Mariani is not a cocaine preparation, but a wine possessing the aromatic and desirable qualities of fresh coca leaves.—*The Coca Leaf*, November, 1903.

The Propriety of Bearing Testimony to True Merit.—In a practice of over fifteen years I do not think I have written over three or four testimonials for proprietary medicines, but I cannot see any impropriety in bearing testimony to a truly meritorious remedy, and especially where that remedy has stood the test of time with thousands of physicians who with one accord verify its curative virtues in a certain line of disorders. This is true of the preparation Sanmetto, which I consider a wonderful remedy and almost a specific in all inflammatory diseases of kidney and bladder. I prescribe it daily in my practice, and it has never yet disappointed me, but has frequently surprised me by its wonderful curative powers. When I am called to treat a case of cystitis my thoughts revert to Sanmetto; in fact, I have learned to associate Sanmetto with cystitis, and from the thousands of testimonials received, and the number of favorable reports in the medical journals, I hardly see why the manufacturers of Sanmetto desire more. It seems to me that a physician who does not know of the virtues of Sanmetto is very far behind the age.

Columbia, La.

W. P. HUGH, M.D.

ST. LOUIS Medical and Surgical Journal.

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ORIGINAL COMMUNICATIONS.

SIX YEARS' EXPERIENCE WITH TUBERCULOSIS IN THE WEST.*

BY EARL S. BULLOCK, M.D., SILVER CITY, N. M.

It occurred to me that the best means at my disposal for demonstrating my appreciation of the honor of addressing you to-night would be to give a *resume*, as brief as possible, of my experience with tuberculosis out West, both as patient and physician.

During the past ten or fifteen years there has been such a flood of literature on tuberculosis that it requires a good deal of temerity to add to it, and if I did not have a sincere conviction that it yet remains a most fruitful source of investigation and that I have a little to add to the general fund of information on the subject, I fear I should lack the courage to do it.

Ever since I was myself sent West in search of health, six years ago, it has been my ambition to be able, at some future time, to lay before the profession certain facts and figures which may tend to prove or disprove the claims which have been made on behalf of climatic influences in phthisiotherapy. When a man gets well of such a serious disease as tuberculosis is likely to be, it is but human to wax enthusiastic over the conditions under which one has really or apparently recovered, and it is a fact that a large proportion of the writers in favor of climatic treatment have themselves obtained health in the far West. Thus, appreciating that the affirmative side of the question has and always will be well cared for, I have paid

* Read by invitation before the Philadelphia County Medical Society, Oct. 14, 1903.

more attention to its negative aspect, though always trying to bear in mind the sound reasons in favor of climatic phthisiotherapy. If, however, equally good results are to be obtained in so-called unfavorable climates we certainly wish to know it, that all the expense and discomforts which attend sending patients so far from home may be stopped. During the time I have studied tuberculosis in the West I have never lost sight of my original idea, and much of what I have to say to-night bears directly on this point, viz., the real value to the consumptive of the so-called favorable climate.

I have had personal experience in all the following health resorts, a good deal in some and little in others: Denver, Colorado Springs, Fort Collins and Pueblo in Colorado; Raton, Las Vegas, Santa Fé, Albuquerque, Deming, Fort Bayard, Las Cruces and Silver City, in New Mexico; Phoenix and Tucson, in Arizona, and El Paso, in Texas.

Resorts for consumptives all have much in common, though they may differ widely in details. Some, though few, are well-built towns and cities, though most, from an Eastern point of view, are miserable places of habitation. Everywhere is the ubiquitous consumptive spitting promiscuously, and the fact that there are so few cases of local infection speaks most forcibly for the truly wonderful healthfulness of the arid region. In few places is the consumptive really wanted. The doctors may desire his presence, but, as a rule, the people do not. It is a fact though, that money is potent with the health-seeker as with others, and when well supplied with it the invalid gets pretty much what he wishes. There are, of course, a number of excellent places open to invalids, but most of them are very expensive or receive patients so far advanced as to make them objectionable to the average health-seeker. What I particularly mean to imply is, that the invalid finds great difficulty in placing himself under anything like as good conditions as he would enjoy at home for an equal expense. As a rule, there seems to be but one compensation in having a consumptive about, and that is to get all possible out of him. It has often seemed to me that the consumptive is managed for the benefit of the people where he goes rather than in his own interest, though in justice I must say that there is hardly a county hospital in the West that does not have its quota of Eastern in-

valids, and I have never heard any objection, every one seeming to accept the burden of supporting the citizens of other States quite as a matter of course. A great many poor people go West for health's sake, and many of them become actual burdens to the communities to which they go. So, to take every possible advantage of the moneyed invalid may work out fairly in the long run, though it seems rather a hard practice to be gracefully accepted by the individual.

Everywhere is one impressed by the fact that the invalids are usually doing what they ought not to do. They are essentially idle folk and prone to follow the ways of the idle. They always find the centre of population, and, gathering together, support the adage that "like seeks like." Nothing can be more pathetic than to see the poor creatures sitting about the plazas, spitting and talking. To an observer picking his way carefully between expectorations, sometimes a difficult thing to do, and making the circuit of the square, the occupants of the crowded benches seldom or never show among them a happy, contented face. Standing about the hotels, watching the trains or the roulette wheel in the corner saloon, sometimes risking a little money themselves, or anything to break the dead monotony of their lives, they are always the same pathetic victims of the scourge of civilized States. Hunting, riding horseback or taking tiresome walks, they are seemingly constantly busy violating every principle laid down by the immortal Brehmer. One exclaims: Poor old climate, what a lot you are expected to do! Now and then, fortunately, may be seen a porch or tent fitted up for out-door life. Everything is comfortably and tastefully arranged. The invalid, occupying his cot or chair, is reading, maybe, and it is recognized at once that here is a properly managed case, and inquiry will elicit the fact that a careful physician in the East has sent the patient to some careful physician in the West. Such a patient is a very great contrast to those previously described. The daily life is purposeful and filled with little duties, from egg-nog to massage, all tending to make a useful citizen again. The patient may lie on his cot nearly all day, yet he is not idle. On the contrary, he is very busy getting well. A wistful, homesick, discontented expression will be absent in such a case. The fact remains that most people are sent West in

an utterly irresponsible way and, if they come under medical care at all, it is usually delayed until every chance of recovery is past. It seems so simple to send patients to some one who is known to be capable of managing them properly, that it is difficult or impossible to condone this careless way of shipping people to a strange land to shift for themselves under new conditions and surroundings. As in nearly every case a doctor has suggested the advisability of going West, the responsibility for this state of affairs rests squarely upon the shoulders of our profession.

One of the first lessons I drew from my experience was that most people who go West for their health are disappointed in the result, partly for reasons which I have endeavored to make clear, and partly because more is expected of the climate than it can possibly perform under any conditions. The majority of the tuberculous invalids that are observed have long since passed the point at which they would be favorable cases for admission to the large institutions in the East, and it does seem absurd that cases deemed hopeless at home should at once be regarded as hopeful because they have been sent West. I am, moreover, convinced that during recent years we have overestimated the curability of tuberculosis, even under the most favorable conditions in a favorable climate, and, furthermore, that there is a great tendency to underestimate the length of time required to effect a cure. During the first eight months of my own invalidism I was a model patient, and laid the foundation for a subsequent recovery, which, however, was not achieved until four years had passed. although mine was an insipient case of the best or afebrile type. I was thus impressed with the fact that to get well at all is a large contract to fill, and requires a much greater expenditure of time than is ordinarily allotted to it. Cases are so variable and the constitutional equation upon which so much depends is so little known that it is never more than guessing to put a time limit upon tuberculosis. I have several instances in mind in which patients were sent West five or ten years ago to get well in six months and they are still coughing. The Lord only knows how many are dead who were assured of an early and brilliant recovery!

An interesting class of patients observed is exemplified by

the person with ample means and the invalid habit. Though recovery has occurred, possibly years before, a certain delicacy of constitution and long-established custom have impelled a conviction that idleness is the only business compatible with living. With some this becomes a fixed idea which drives them South for the winter and North for the summer, *ad infinitum*. For my part I cannot understand what good it does to get well when it requires the energies of a lifetime to keep well. Then there is the invalid with the climate habit. He is always interested in the place in which he does not happen to be. I knew one poor chap, visiting thirty-seven towns in two years, who followed that *ignis fatuus*, the proper climate for his case. When failure is progressive and the end is near, it is indeed sad to see such as he race from town to town, each journey bringing him a little nearer the final stopping place. This too is often the fault of a doctor who lacks the courage frankly to advise a return home, and yet will hold out a false hope in order to rid himself of a dying patient.

During even a few years' experience one comes in touch with a number of old chronic cases in which hope of recovery has long since been abandoned. Yet many of the people thus doomed lead very useful lives, and unquestionably live longer in our beautiful climate under the more natural conditions thus possible than they would had they remained East. Once in a while a man will be observed who has recovered while roughing it. But where one gets well in this way many discover that it will not do, though often the knowledge costs more than can be paid. Fewer people than formerly have the idea that large quantities of whiskey must be consumed in order to make a recovery. There are still enough, however, to demonstrate the real character of this rather agreeable method of committing suicide.

Among the hundreds of pulmonary invalids who have crossed my path I have yet to notice in them any more pronounced irregularities of temperament than is natural in people who live on the edge of the grave. I have no patience whatever with those theories which ascribe to the consumptive a distinctive psychology, which by some writers has been carried to the absurd point of endowing these poor sufferers with criminal inclinations. There is no question, however, that character

and temperament influence the result, and some, though few, are not so constituted as to be able to do their share in the battle for health. I have found the majority of patients to be well adapted to invalidism which has a definite end in view, especially when fairly large numbers are gathered together, as in a sanatorium. The only exception I would make is the girl or young unmarried woman. Such are nearly always discontented, unsatisfactory patients, and I have concluded that they should be sent away from home only when accompanied by an older relative.

There are observed a great number of genuine cured patients who illustrate the best result of being sent West in search of health. Now, these constitute but a small proportion of the whole number who recover, most of whom return to their homes in the East. It is thus only fair to infer that there must be, after all, a large number of people who recover health in the high, dry climate of the West.

In few places visited is there any special provision for the care of consumptives. The houses were built for the well, not for the sick, and, as a rule, are inadequate even for them. It often requires a good deal of thought to place a patient advantageously. However, even under the most unsatisfactory conditions, there is no insurmountable obstacle when an intelligent will acts in behalf of the patient.

Under present conditions many people who go West become so discouraged by the difficulty of obtaining the necessities of life, or at least of surrounding themselves with anything like what they have been accustomed to at home for a price within their means, that they become disgusted and return East within a short time.

It has always impressed me as a great mistake to send invalids to places where the conditions are propitious only a part of the year, where a blistering summer or an arctic winter compels them to go North or South during those seasons, especially as there are so many towns in which the invalid may remain comfortably out-of-doors all during the year. I would not myself send a tuberculous invalid to a city in search of health. After all, and quite regardless of climate, a city environment must be inimical to a class of patients whose safety depends upon a return to more natural conditions of life, and

urban life is practically the same in New York or Denver. As a result of my study of western health resorts I am prepared to say there is in them very little appreciation of the principles of phthisiotherapy as they are applied East and abroad, especially as they are understood in the great sanatoria. There are, of course, many physicians thoroughly imbued with them and who practise them conscientiously, but only a small proportion of the health-seekers come under their direction.

During the summer of 1899 I received an appointment as pathologist to the recently established government sanatorium at Fort Bayard. This position seemed to offer great possibilities along the line of study so much desired, and it occurred to me that at last I would be in a position to discover for myself the true value of climatic phthisiotherapy. In this I was thoroughly disappointed, for reasons which I will endeavor to make plain. The one important deduction that resulted from two years' experience there was how tuberculous invalids ought not to be treated. During my time Fort Bayard was to all intents and purposes a prison. This, with the inferior character of the patients, the lack of the requisite moral and mental attributes, reduced the period patients were under observation to a little over four months—much too short a time in which to draw reliable data in tuberculosis. No attempt whatever was made to individualize the patient, upon which so much depends. They were treated *en masse*, practically by one man from the time the institution contained forty patients until the number passed two hundred. The patients occupied barracks that were out of date even for healthy soldiers. During the day they idled about, confined within certain imaginary lines, to go beyond which was very likely to entail several days in the guardhouse on a bread and milk diet. The general atmosphere of the place inspired restlessness and discontent. A discipline accepted without murmur by a man as a soldier became intolerable to him as a patient. As soon as he was discharged from the army, following upon a diagnosis of tuberculosis, being free, he promptly decamped for home. Failure to individualize and to deal with the patients upon a broad humanitarian basis, by driving favorable cases away, cost many a life I am sure, and inculcated a lesson by which I have tried to profit during my subsequent relations with tuber-

culous invalids. As a scientific project Fort Bayard labors under the tremendous disadvantage of a changing staff, the officers remaining usually but a short time. However, the sanatorium is yet in its infancy, and, like every government institution, develops slowly. I thoroughly believe that results will yet be accomplished of which we will all be proud, especially if a Reed or a Carrol happens to be ordered there for duty. The opportunity afforded by such a large supply of clinical material is sure to be utilized by some one sooner or later.

Following a suggestion of my own the cases at Fort Bayard were divided into three classes, as follows: (1) those exhibiting permanent afebrility, without tubercle bacilli in the sputum; (2) those exhibiting permanent or approximately permanent afebrility, with bacilli in the sputum; and (3) those exhibiting permanent febrility, with bacilli. In the first class, which included cases in which the ulcerative stage had not yet been reached, the diagnosis was confirmed by the tuberculin test whenever possible. In the second there was either pure ulcerative tuberculosis or minor degrees of mixed infection. The third included those in which there was mixed infection of high degree. This method of classification proved very satisfactory, and, with our present knowledge of the tuberculous and allied processes, is much more useful and scientific than the old way of dividing cases into the so-called stages, infiltration, consolidation and cavity; or incipient, advanced and far advanced. Some very excellent and hopeful cases may be present in all three of these stages. A case in which there is consolidation and cavity, but no mixed infection, will prove much more curable than one in which there is a small area of infiltration and a high degree of mixed infection. In the first instance the patient may reach old age, but in the second is almost sure to fill an early grave.

There were certain features common to all the cases at Fort Bayard which are worthy of note. The first and most striking was the apparant permanency of the different types, that is, cases in which the temperature did not drop below 100° shortly after admission remained permanently febrile. Cases afebrile upon admission, or those in which the temperature dropped below the febrile point shortly after admission, also exhibited marked permanency of type, as did those of the remaining

class, afebrile cases without bacilli in the sputum. It is thus clear that there is nothing definite about the course pursued by tuberculosis. The disease may end anywhere, either before or after the ulcerative stage is reached. Careful investigation into the family histories in all the cases proved the relatively insignificant rôle of a tuberculous family history as an etiological factor in the production of the disease. Much more important was a previous acute febrile disorder, which had been almost invariably present. In 51 per cent. of all cases at Fort Bayard a history of pulmonary hemorrhage was elicited, and yet this accident occurred in but 15 of 283 cases during treatment, showing conclusively not only that a high altitude does not predispose to the occurrence of hemorrhage, but really prevents it. Owing to the hygienic environment intercurrent diseases played a very minor part, and reinfections, diarrheas and night-sweats occurred so infrequently that they were not deemed worthy of special tabulation.

In regard to pulmonary hemorrhage, my observations at Fort Bayard, as well as subsequently, impressed upon me that this is an accident and not a part of the tuberculous process, and usually, though not always, bears a definite relation to blood pressure. Hemorrhage is much more likely to occur in cases in which the blood pressure is high than in those in which it is low. As these so-called hemorrhagic types are, from other causes, usually favorable, it has come to be an accepted principle in phthisiology that hemorrhagic cases are good cases, as though the occurrence of hemorrhage and a favorable outcome are related facts. In reality the relationship is accidental. I, myself, always dread hemorrhage, for, even if not immediately fatal, which, of course, it rarely is, it has indirectly, in my experience, been the apparent cause of a fatal termination in many cases otherwise brilliant.

Of the 153 patients who were discharged or died during the first two years at Bayard, 17 per cent. died, 33 per cent. were unimproved, 23 per cent. were improved, 16 per cent. were convalescent, and 11 per cent. were clinically cured, that is, free from all symptoms of tuberculosis, except perhaps the evidence of a former lesion demonstrable upon physical examination. These results compared so unfavorably with those obtained at the recognized eastern and foreign sanatoria, that, had I been

content to let my study of climatotherapy rest upon them, I should have taken the first east-bound train. But in justice to Bayard, especially during the first two years of its life, it must not be forgotten that a large proportion of the cases were hopelessly advanced, the patients' constitutions being wrecked by tropical diseases. Moreover, the time patients were under treatment was much too short to expect a cure, even in those who improved rapidly.

Twenty-two per cent. of the cases admitted during my term of service belonged to the most favorable class, that is, that in which the temperature is normal and in which bacilli are absent. The diagnosis in these cases was confirmed by the tuberculin test whenever possible. In all, the presence of adventitious organisms in the sputum was a marked feature. The usual organisms observed were: staphylococci, streptococci, leptothrix, buccalis, micrococcus, pneumoniae, crouposae, micrococcus tetragenus, and sarcinae. In this class of cases mixed infections was surely absent, and yet the bacterial causes of mixed infection were uniformly present. The explanation of this phenomenon which I favor is, that having very little sputum a greater effort is necessary to raise it, and so it becomes thoroughly mixed with secretions from the mouth and throat which carry the various organisms. In this class of patients the diazo reaction was never observed. In two cases the tuberculin test was negative on admission, and yet bacilli appeared in the sputum in a short time. Leukocytosis was absent, as were degenerative changes in the red cells. The lesion most frequently observed was a slight infiltration, though in a few cases there was a small area of consolidation. The results in this class were 40 per cent. clinically cured, 43 per cent. improved, 17 per cent. unimproved, and none died. The average daily maximum temperature being 98.9° F., it is perfectly clear that tuberculosis previous to the ulcerative stage is an afebrile affection. As might be inferred, in none of this class did hemorrhage occur. These cases are examples of the most favorable type of tuberculous invalids, and for this reason researches in climatotherapy cannot fairly be based upon the results,

Fifty-nine cases belonged to the class in which, though the temperature is normal or but slightly elevated, bacilli are

present in the sputum. They are either cases of pure ulcerative tuberculosis or of minor degrees of mixed infection. In these, when fever occurs, it is always amenable to rest treatment. Secondary anemia was present in about half of this class, and in nearly all it ceased to be a factor within a short time. Leukocytosis was present in about half and, like the anemia, usually disappeared. In only a few were there degenerative changes in the red cells. Adventitious organisms were present in the sputum in but 6 per cent. The average temperature was 99.5° F. The diazo reaction was uniformly absent. None of this class died. Twenty-nine per cent. were discharged unimproved; 48 per cent. improved; 16 per cent. were convalescent, that is, without bacilli; and 7 per cent. were able to pass the tuberculin test. In this class the usual lesions were both infiltration and consolidation, and in a small proportion there were cavities. This is the type in which the results of climato-therapy may be employed fairly for purposes of comparison with treatment in unfavorable climates. If, under equally good conditions, the results are better than can be obtained East, then the question of climato-therapy in tuberculosis is settled, and it is right to send these people West. However, comparison is not as easy as it seems, for at most of the large institutions in the East none but incipient cases are admitted, and in discharging patients the ambiguous term "arrest" is employed, and that little word may cover a multitude of bacilli.

During my service at Fort Bayard forty-eight cases were discharged or died in which permanent febrility was present. In this class the average temperature was 101.5° F. In nine there was a complicating laryngeal lesion. All presented secondary anemia, and in all there was leukocytosis. There were degenerative blood changes in almost half. In but fourteen were adventitious organisms present in the sputum, showing conclusively that the presence of these organisms, though confirmative, is not sufficient upon which to rest diagnosis of mixed infection. In about half the diazo reaction was present. Nearly all presented the signs of advanced pulmonary disease, there being cavities in thirty-eight of forty-eight cases. Fifty per cent. died, 42 per cent. were discharged unimproved, and 8 per cent. were slightly improved. None were cured. With

a death-rate of 50 per cent. and a hopeless prognosis in the remainder, the futility of sending permanently febrile cases West ought to be clear to all of us.

While at Fort Bayard I was placed in possession of conclusive evidence that the tuberculin test is not a justifiable procedure in human beings, and also that it cannot be depended upon as completely demonstrating the presence or absence of a tuberculous process.

Next, in chronological order, comes my experience at St. Joseph's Sanatorium, Silver City, New Mexico, where I have been the medical director since its establishment two years ago. The reasons for its location at Silver City were the same as those operative in selecting a site for the government institution at Fort Bayard, viz., a climate which permitted comfortable out-door life during all the year. I would like to take this opportunity to correct some mistaken ideas in regard to the climate of the Southwest. In almost all places in Arizona or New Mexico having an altitude of from five to seven thousand feet, the climatic conditions are much the same. It is colder in winter than is usually thought, the thermometer reaching the freezing point almost every night during December, January and February, while the bright, clear, winter days are sufficiently warm to permit patients to remain out-of-doors with but little bundling or other inconvenience. The summers, too, are cooler than is popularly supposed, and are, in fact, ideal. If Silver City, climate and all, could be transported East, it would shortly become the most famous of summer resorts. With but thirteen inches annual rainfall, the so-called rainy season affects the prevailing dryness but little. In regard to the relations of the different seasons to phthisiotherapy, I can say with conviction that the fall, winter and spring months are most favorable to the tuberculous invalid. Patients who have done well during the previous winter usually continue their progress during the summer, and, on the contrary, those who have failed during the winter, will, as a rule, go all to pieces during the summer. As for newcomers, the contrast with their home climate is so great at any time of the year that they apparently do about as well in the summer, though they gain weight more rapidly as the cool weather begins.

In describing the scheme of organizing St. Joseph's I would first like to pay a deserved tribute to the president of the advisory board, Dr. H. M. King, the present medical director of the Loomis Sanatorium, who made the long trip across the continent for no other purpose than to assist at the birth of a new institution for the tuberculous. The institution also owes a great debt to the Sisters of Mercy for their devoted service. In the face of every obstacle, and our discouragements have been many, they have been unswerving in their loyalty to the institution. The effort has been made to safe-guard every professional and scientific ideal, and, with this in mind, the medical administration was placed in the hands of an advisory board composed of men who have proved their interest and accomplishment in the field of tuberculosis. The medical director is a representative of this board, and may be removed and replaced at the pleasure of its members. A unique feature of our work is the practice of sending monthly reports to the home physician. This permits him to follow the patient from month to month, and not lose the case scientifically, as is usual in sending patients away from home.

The buildings conform to the old mission type, and are placed around a central court. They consist of an infirmary for febrile cases, a building for ambulant patients, a dining-room and kitchen in a separate structure, a laboratory, etc. Every room occupied by patients is so constructed that the air is fully as pure indoors as out, at all times of the year. This has been accomplished by having each room open on porches on both sides, thus doing away with inside halls. Recently, as a temporary expedient, a few tent cottages have been employed, but their lack of durability makes them undesirable when properly constructed buildings may as well be had. The laboratory, on account of deficiency of means, is as yet quite incomplete. It is our purpose that St. Joseph's shall include a second or daughter institution, where poor patients can be properly cared for at a nominal expense, though so far it has been impossible to take even the first steps toward the accomplishment of this part of our plan. Likewise we want cottages for the accommodation of patients accompanied by their families. As far as practicable and consistent with humanitarian principles, hopeless cases have been excluded from St. Joseph's. Never, how-

ever, has any one been turned from the door. Right here seems a propitious moment for registering my protest against the practice of some institutions of admitting only favorable cases, as though record-making were the only object of medical science, and it seems to me that every institution should be open to every one with a fighting chance for life. The management of St. Joseph's is very grateful for even the advanced and hopeless cases who have come to us, for without them we would have been obliged to close our doors. The institution has been fortunate in that it has never been necessary to turn any one away because he was without means, though, of course, as St. Joseph's is entirely self-supporting, we would be obliged to do so if there were many applications from indigent individuals.

The principles of treatment are those common to all modern institutions of the same character, and consist of out-door life, rest, and nitrogenous feeding. Without going into details of therapy, I would like to say, in this connection, that I have found the fluid extract of cocillana the prince of expectorants in cases in which such a drug is required. I know that it is very little employed, and so feel it a duty to mention my experience with it. Calcium chloride, a very potent weapon in pulmonary hemorrhage, I consider worthy of special mention. Without having any influence over the hemorrhage at the time, it is almost certain to prevent its recurrence. In regard to the treatment of a laryngeal lesion, I may say frankly that to all intents and purposes it is palliative only, and much more depends upon the constitution of the patient than upon any treatment employed.

In the following report of the first two years' work at St. Joseph's Sanatorium, mention is made only of those cases in which the patients have died or been discharged. Patients still under treatment are not considered. In the summary of results achieved at St. Joseph's the details of cases have not been tabulated, for, in general, the observations made at Fort Bayard have been substantiated by the experience at St. Joseph's.

Excluding those cases in which the diagnosis was imperfect, and those in which treatment was continued less than one month, there are forty-nine cases to be considered, which are divided into two classes, febrile and afebrile.

There were twelve febrile cases and thirty-seven afebrile.

Of the febrile cases none were cured, 25 per cent. died, 58 per cent. were discharged unimproved, and 17 per cent. were discharged improved, though in them the ultimate outlook was not favorable. These results are very similar to those obtained at Fort Bayard in the same class.

Of the afebrile cases none died, 19 per cent. were discharged unimproved, 46 per cent. were improved, and in most of them a cure was potentially possible had they remained under treatment long enough. Thirty-five per cent. were clinically cured.

Taking both classes together the results were: 6 per cent. died, 28 per cent. were unimproved, 38 per cent. were improved and 28 per cent. were cured. The forty-nine patients considered were under treatment an average of six and one-half months, though, of course, in the favorable cases the patients remained much longer—nine to twelve months, as a rule.

I thoroughly appreciate that our cases have not been numerous, and my contribution toward settling the final word on the value of climatotherapy in tuberculosis is not what I hope it some day may be. In view, however, of my experience and observations, I venture to give for what they may be worth my convictions in the matter under discussion:

1. We are not justified in sending patients with a high grade of mixed infection away from home; certainly not across the continent. Moreover, it is little short of criminal to ship a patient, even of the most favorable class, into the West, either to shift for himself under conditions that may prove inimical to his moral as well as his physical welfare, or to bring poverty upon those near him.

2. A climate in which the invalid may remain comfortably out-of-doors all the year through; in which dryness of the air prevents colds and cures a catarrhal disposition; in which the natural healthfulness prohibits intercurrent diseases, and in which the altitude checks or inhibits the hemorrhagic tendency—such a climate certainly presents for selected cases, with little or no mixed infection, the most favorable environment to be found on the face of the globe.

CONDITION OF THE BLOOD IN PATIENTS SUFFERING FROM PULMONARY TUBERCULOSIS.*

BY JOHN M. SWAN, M.D., PHILADELPHIA, PA.

The study of the condition of the blood in the patients suffering from pulmonary tuberculosis who furnished the material for this paper was made possible by the kindness of Dr. Julius L. Salinger, who placed his tuberculosis ward in the Philadelphia Hospital at my disposal. The paper is based on the counting of the erythrocytes, the counting of the leukocytes, the estimation of the hemoglobin, the differential count of the leukocytes, and the search for the iodine reaction of the leukocytes in twenty-five cases of pulmonary tuberculosis and one case of extensive cavity formation in the lung due to bronchiectasis.

In studying the results of these blood counts I shall adopt the classification of Grawitz,⁴ who divides the disease into three stages: a first stage, in which there is a beginning affection of the apex, without cavity formation; a second stage, in which there are symptoms of cavity formation with slight fever or without fever; and a third stage, in which hectic fever is present.

FIRST STAGE. There is one patient who represents the first stage of consolidation of the apex, without cavity formation. This patient showed a slight reduction of the erythrocytes to 3,980,000; a normal number of leukocytes, 10,000; and a moderate reduction of hemoglobin to 70 per cent. This patient improved very much under treatment and was finally discharged without symptoms and with few physical signs. As his general condition improved there was a corresponding improvement in the blood picture; the erythrocytes rose to 4,580,000 and the hemoglobin increased to 82 per cent. With the improvement of the blood condition the leukocytes rose to 16,600.

An examination of the differential leukocyte count of this patient shows that the relative proportion of the different cells was not changed. The treatment, under which the patient greatly improved, apparently caused an increase in the eosinophiles from 1.6 per cent. to 3 per cent.

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SECOND STAGE. There are eight patients representing the second stage of the disease: the stage of cavity formation without fever or with but a slight febrile reaction.

Among these patients, the erythrocytes were usually normal in number; in four instances they were present in greater numbers than 5,000,000 to the cubic millimeter; and in one instance they numbered only 3,680,000. The range of the erythrocyte count was from 6,710,000 in a negro who had complained of cough for eight years, to 3,680,000, also in a negro, who had been ill for two and one-half months and who had albuminuria.

Seven of these patients showed a leukocytosis varying from 34,000 to 11,120 and one showed a leukopenia of 7,100. The latter patient had carried a cavity in his right lung for a number of years and the disease was stationary.

In these patients the differential counts showed, as a rule, a percentage of polymorphonuclear cells above 80, the highest being 93.4. In 3 cases the polymorphonuclears formed 70.4 per cent., 73.6 per cent. and 78.8 per cent. of the leukocytes respectively. In one patient the first examination was made during an asthmatic paroxysm and showed 80.8 per cent. of polymorphonuclear cells. A second examination was made about four weeks later, after the asthmatic paroxysms had ceased, and gave 78 per cent. of polymorphonuclear cells. Eosinophile cells were present in all of these patients except two, in proportions varying from 3 per cent. to 0.2 per cent. The two patients from whose blood these cells were absent left the hospital before a second examination could be made and their ultimate fate is unknown.

The hemoglobin varied from 90 per cent. to 63 per cent., although all patients showed some pallor of the skin and the mucous membranes. Indeed, in some instances, the percentage of hemoglobin was at first thought to have been erroneously estimated until more than one trial showed the reading to be accurate.

THIRD STAGE. There are fifteen patients who may be placed in the third stage of the disease, that of hectic fever. In these patients the erythrocytes were usually reduced in number, although a normal number of these cells was occasionally found. The counts ranged from 5,710,000 to 2,890,-

000, with an average of about 4,019,130. The highest count was obtained from a patient who was rapidly improving under treatment; indeed, he might be placed in the second stage of the disease, but for the fact that a former count was made while he was having marked hectic fever.

The leukocytes were usually increased in number, giving a leukocytosis of from 247,000, in a very rapidly progressing case, to 10,080. Five patients gave a leukocyte count below 10,000: 8,480, 7,600, 7,600 to 9,600 and 6,733 respectively.

The polymorphonuclear cells were usually above 80 per cent., varying from 97.6 per cent. to 80 per cent. In five instances these cells formed less than 80 per cent. of the entire number of the leukocytes, varying from 78.8 per cent. to 69 per cent.

The eosinophile cells were usually absent from the blood of those cases that proved fatal.

The hemoglobin varied from 95 per cent. in a patient who was improving on treatment, to 35 per cent. A rise in the hemoglobin percentage was usually noted just before death and was attributed to the sluggishness of the peripheral circulation as the end approached.

In the case of a patient who failed rapidly and who died about forty-three days after admission, the erythrocytes numbered 3,800,000, 3,820,000, 3,020,000, and the day before death 4,600,000. In this patient the leukocytes were always below 10,000: 7,600, 7,000, 6,300, rising the day before death to 9,600. The hemoglobin varied from 50 per cent., 55 per cent. to 85 per cent. the day before death. The percentage of polymorphonuclear cells was 77.2 per cent., 80 per cent., 78.8 per cent. and 80 per cent. respectively. When the blood was first counted there were 0.4 per cent. of eosinophiles, but twenty-four days later these elements had disappeared and were not again found in the peripheral blood.

COMPLICATIONS. The series of cases comprising this study contains two cases of pulmonary hemorrhage, six cases of albuminuria, two cases of tuberculous diarrhea, five cases of pleurisy and one case of asthma,

HEMORRHAGE. One patient had been spitting blood for two weeks and had had two distinct hemorrhages, the last one a few days before the blood examination was made. The hemoglobin suffered a marked reduction (55 per cent.): the

erythrocytes numbered 5,220,000; there was no leukocytosis (8,480). There was no nucleated erythrocytes and the differential count showed nothing abnormal.

The second patient had two hemorrhages on May 25. On May 28 his hemoglobin was 55 per cent., there was a leukocytosis of 15,800, but the erythrocytes numbered 4,380,000. The lymphocytes were reduced to 7 per cent., and there were 14.4 per cent. of transitional forms. The man had a third hemorrhage on May 30, and two days later the erythrocytes numbered 3,430,000; there was a leukocytosis of 20,700, and the hemoglobin was reduced to 55 per cent. There were no nucleated erythrocytes.

ALBUMINURIA. Albuminuria seems to have little if any influence on the blood picture. Of the six cases in which this complication was noted the erythrocytes varied from 6,710,000 to 2,890,000. The leukocytes varied from 24,240 to 7,600. The hemoglobin varied from 37 per cent. to 90 per cent. The polymorphonuclear cells formed more than 80 per cent. of the total number of leukocytes except in two instances. Eosinophile cells were absent from the peripheral blood in all except two instances.

TUBERCULOUS DIARRHEA. Two patients suffered from tuberculous diarrhea. In both of these patients the erythrocytes were reduced and the leukocytes were increased in number; the hemoglobin was markedly reduced and the polymorphonuclear cells formed more than 80 per cent. of the total number of leukocytes.

PLEURISY. Of the five cases of pleurisy the most constant feature of the blood examination was the leukocytosis. One patient did not show the reaction, his leukocytes numbering only 8,100. In the others the leukocytes varied from 10,600 to 34,000. The polymorphonuclear cells constituted the bulk of the leukocytes in these cases.

Case No. 24 presented nontuberculous cavities in the posterior portions of both lungs. This patient's blood count showed 4,750,000 erythrocytes; 15,400 leukocytes; hemoglobin, 70 per cent. The polymorphonuclear cells formed 81.2 per cent. of the leukocytes, and there were 1.8 per cent. eosinophiles.

IODIPHILIA. I did not succeed in demonstrating the iodine reaction in any of my specimens. Locke² has found this reaction absent in uncomplicated tuberculosis; but Da Costa⁶ has found it present in septic cases.

EOSINOPHILIA. As the study progressed, my attention was attracted by the fact that eosinophile cells were not to be found in many of the specimens, and it soon became apparent that the cases in which these cells were absent were fatal ones. There are five exceptions to this, however. Case 9 at the time of the examination showed 0.4 per cent. of eosinophiles, and he is known to have died, although how long after the examination I am unable to say. Case 12 showed 0.8 per cent. of eosinophiles four weeks before death; but when a second examination was made, two weeks before death, no eosinophile cells were present. Case 17 showed 0.4 per cent. of eosinophiles forty-two days before death, but examinations made seventeen, six and one day before death showed absence of eosinophiles. Case 24 showed 1.8 per cent. eosinophile cells, and the patient died after a surgical operation for the drainage of a nontuberculous pulmonary cavity.

Cases 6, 7 and 10 showed absence of eosinophiles when the blood was examined, but these patients left the hospital, and their fate is unknown.

Cases 25 and 26 were under treatment which apparently produced much improvement in the physical condition of the patients. In these patients the eosinophiles increased as improvement progressed; in 25 rising from 0.2 per cent. on the first examination to 1.6 per cent. on the second; in 26 rising from 1.6 per cent. to 3 per cent.

I am inclined to believe that the presence or absence of eosinophiles in the peripheral blood of tuberculous patients is a sign of some prognostic significance. Levaditi¹ makes the following statement: "Tuberculin, among the bacterial products, appears to have eosinophilous properties. Jurgens has already shown, in tuberculous patients who succumbed in the course of treatment with tuberculin, an increase of the number of white cells of the blood. Tschistowitch, Grawitz, Bischoff, and Botkin examined the blood during life and discovered quantities of eosinophiles much above normal. This oxyphilia appeared also, according to the more recent statements of

Bettman, in the course of the treatment of tuberculosis with tuberculin and with cinnamic acid." Zappert¹⁵ also found an increase of eosinophile cells after injections of tuberculin; but in four out of eight cases of pulmonary tuberculosis these cells were reduced in number and in another of the eight cases they were absent. There is no note concerning the ultimate fate of these five patients.

Claude and Aly-Zaky³ say that treatment of experimental tuberculosis in guinea-pigs produced changes in the blood formula as seen in control animals. In those animals in which treatment resulted in deferring the fatal termination, the eosinophiles were found increased, even as high as 12 per cent. in some cases, particularly in the period of initial reaction to the infection.

Cabot⁵ says that in most cases associated with leukocytosis eosinophiles are absent. They may be increased in cases with cavities in which possibly the individual inoculates himself with tuberculin manufactured in the cavities of his own lungs.

Brown⁸ quotes Teichmüller's statement that an increase of the eosinophiles in the blood and in the sputum of tuberculous patients is a favorable prognostic sign. Brown, himself, agrees with the observation of Teichmüller that the percentage of absolute number of eosinophile cells present is of real value in the prognosis of tuberculosis. Teichmüller's work¹⁴ was done on sputum, which he stained by various methods, principally by eosin and methyl blue. He believes that in bad cases eosinophile cells are usually absent from the sputum, although an isolated cell may be found occasionally. He considers the study of the eosinophile cells in sputum an indispensable aid. It gives a method of estimating the resisting power of the patient, of determining the prognosis and of critically estimating the value of special therapy.

Ehrlich and Lazarus⁹ account for the occurrence of a polymorphonuclear leukocytosis by the chemotactic influence of certain bacterial products. The neutrophile cells are the ones ordinarily drawn from their storehouse in the bone-marrow by this chemotactic influence of substances circulating in the blood stream.

The majority of the bacterial products is positively chemotactic for the neutrophile cells; while only a few substances,

among which tuberculin is included, according to the observations of the authors just quoted, are positively chemotactic for the eosinophile cells. The variation of the eosinophile cells in the circulating blood of tuberculous patients may be explained as follows: In cases of incipient tuberculosis eosinophile cells are present in the blood stream in about normal proportion, because there is not enough tuberculin manufactured in the lesions to produce a marked eosinophilia. When, however, the secondary infection with the organisms of supuration occurs, the neutrophile cells are attracted by the chemotactic power of the products of their growth which circulate in the blood, and the eosinophile cells are repelled, so that we find an excess of polymorphonuclear neutrophile cells in the peripheral blood. As the patient gradually becomes more saturated with the latter poisons and the fatal termination approaches, the eosinophiles progressively diminish in number and disappear from the peripheral blood. If, however, the progress of the case is influenced favorably by treatment, the symptoms of the secondary infection disappear and the chemotactic influence of the products of the pyogenic organisms is withdrawn, so that the tuberculin being produced in the lesions may exercise its chemotactic influence to attract the eosinophilous polymorphonuclear cells from the bone-marrow into the blood stream.

CONCLUSION. 1. The blood picture in pulmonary tuberculosis is not constant and the conditions described by Grawitz⁴ are by no means absolute. There are cases in each of the three stages of the disease that are quite out of the limits of cellular and hemoglobin contents described by him.

2. Omitting the exceptional cases from consideration, however, the average case in the first stage of the disease presents a slightly reduced number of erythrocytes, a moderate reduction of the hemoglobin and about a normal number of leukocytes. The average case in the second stage presents a varying degree of leukocytosis, due to an increase in the number of polymorphonuclear neutrophile cells. The erythrocytes are present in about normal numbers, and the hemoglobin is often normal percentage. The average case in the third stage will show a reduction in the number of erythrocytes, a moderate leukocytosis, composed of the polymorphonuclear neutrophile cells, and a high hemoglobin percentage.

3. Hemorrhage is usually followed by a marked reduction in hemoglobin and a slight reduction in the number of erythrocytes. Leukocytosis is not an invariable feature of a posthemorrhagic blood.

4. Albuminuria, of itself, appears to cause no constant change in the blood picture.

5. Tuberculous diarrhea is apparently attended by a reduction of the number of the erythrocytes and of the percentage of the hemoglobin and by an increase of the leukocytes. The latter increase is due to the polymorphonuclear neutrophile cells.

6. Pleurisy is usually accompanied by a polymorphonuclear neutrophile leukocytosis.

7. There is no distinctive blood picture that will serve to differentiate between extensive cavity formation due to tuberculous degeneration and that due to other causes.

8. The leukocytosis occurring in the course of pulmonary tuberculosis is due to an increase of polymorphonuclear elements and not to an increase of the lymphocytes or of the transitional cells.

9. The absence of the eosinophile cells from the blood may be looked upon as an unfavorable prognostic sign. The increase of these cells while the patient is under treatment may be taken as an indication that the progress of the disease has a tendency to become arrested.

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THE SERUM TREATMENT OF HAY FEVER.*

BY LEWIS S. SOMERS, M.D., PHILADELPHIA, PA.

With our lack of knowledge of the basis of hay fever or of definite pathological changes in intimate connection with the disease, one of necessity can hardly expect any single application of whatever nature, to permanently prevent the recurrence of succeeding attacks, and this is especially so when the symptom-complex results from the correlation of various active and predisposing factors. From a general etiological standpoint, one can roughly group the cases of this affection into three classes; those in which a neurotic element apparently predominates; those in which a general systemic condition, such as lithemia, predominates; and those in which the outburst of hay fever is closely associated with the presence of pollen in the atmosphere. This grouping, however defective, has some definite value in classing the cases as regards treatment, and as the application of serum as a therapeutic measure theoretically seems to give the most promising results in the latter class; it is these that form the larger proportion in whom this treatment is applied.

As the result of Dunbar's experiments, he has been led to believe that the specific causal agent of hay fever resides in the pollen of certain grains which produce the disease in the predisposed, but has no effect whatever upon other individuals. The toxin obtained from the pollen grains which is capable of producing hay fever seems to be an albuminoid body found in the starch particles of the pollen granules. It is obtained from a variety of grasses and cereals, such as corn, wheat, oats, rye and maize, and also from golden rod, rag-weed and hog-weed. It is soluble in blood serum, the secretions of the respiratory tract and in salt solution. Undoubtedly, from the studies that have been carried out, the poison is identical as obtained from the various sources mentioned, as it was found that hay fever artificially produced by the pollen toxin of corn was neutralized by the antitoxin obtained from rye, and, as bearing out the probable identity of the toxin from the various plants, it was found that the hay fever was produced irrespective of the source from which the toxin was derived.

*Read before the Philadelphia County Medical Society, Dec. 23, 1903.

The effect of this toxin on a susceptible person seems to be immediately followed by the development of hay fever, the peculiar symptom-complex taking place as completely in winter as at any other season. Dunbar inoculated eight individuals in January by instilling into one eye a few drops of an aqueous suspension of corn pollen, and in every case both the objective and the subjective symptoms of hay fever were produced in varying intensity; at the same time eleven control subjects received the same instillations, but without the production of the slightest reaction. Semon corroborated this, and states that there can be no doubt that when the toxin is used in susceptible individuals it produces the characteristic symptoms of hay fever, and that this artificial hay fever is as variable in intensity as are the attacks of the naturally acquired disease, both as regards its local and constitutional symptoms. As to what constitutes the nature of this susceptibility or special predisposition to both artificial and acquired hay fever, seems to be entirely obscure; and why the toxin produces a violent attack of hay fever in one individual and yet in another will have absolutely no effect, remains unsolved. In the susceptible, however, the symptoms were produced whether the toxin was applied to the eyes or the nasal chambers, or even injected subcutaneously; by this latter method the disease has been reproduced by the injection of a minute amount, with the development of conjunctivitis, coryza, cough and asthmatic symptoms.

As a result of the apparent specific character of the toxin, Dunbar, by working along the lines of immunization and injecting increasing doses of pollen toxin into animals for prolonged periods of time, was able to obtain the development of an antibody in the blood of the animal. This antitoxin was capable of neutralizing the toxin and immediately subdued the hay fever symptoms, with a retrogression of the objective changes produced by the toxin. This was shown by Mayer, who, in a group of cases with hay fever developing in May, June and July, found the antitoxin effective. He used a control test of another individual not susceptible to hay fever in connection with each susceptible case, and each received the same treatment, which consisted in placing in one eye one drop of equal parts of normal horse serum and pollen toxin, while he

dropped in the other eye one minim of equal parts of antitoxin and pollen toxin. When the reaction occurred in the first eye there was redness, burning, itching and some slight edema, while the eye containing the latter mixture remained normal. The symptoms rapidly made their appearance, and when the itching became severe it was immediately arrested by the application of one drop of antitoxin, while in all the control cases but one no reaction took place.

The antitoxin protects susceptible subjects against the effects of a similar toxin, and this influence is exerted not only in the test tube, but also takes place when the antibody is used in the eyes or the nose of an individual after the pollen toxin has been used. Dunbar has demonstrated this by eye inoculations of hay fever patients with a mixture of the toxin and antitoxin, with the appearance of slight itching and congestion, but in half an hour all the symptoms had vanished. In another test, one drop of toxin was placed in the eye, and as soon as the conjunctiva had become congested, and there was some smarting, four drops of antitoxin were instilled in the course of twenty minutes, with the complete neutralization of the toxin and the subsidence of the irritation. The same results were obtained when the nasal chambers were used for the experiment and the disappearance of the irritation under the influence of the antibody was shown here even in a more striking manner than in the eye. It has also been found that the action of an antitoxin on a different toxin is the same as obtained when both bodies are derived from the same source; thus the irritation produced by the pollen of golden rod was rapidly cured by an antibody derived from the various grasses, etc.

The serum antitoxin is, for practical use, applied by dropping one or two minims into each eye and nasal chamber whenever an attack of hay fever is expected, or on the presence of any irritation, and the applications are repeated as may be required. The dried serum may also be used when mixed with an inert powder such as milk sugar, but it can only be used in the nasal chambers; and when applied there, a few grains are drawn into each nostril and repeated as necessary. When the patient is seen some weeks in advance of the expected attack, his general condition must be made as nearly normal as possible; all sources of local irritation of the upper respiratory tract removed

if such can be done, and the antitoxin may be applied to the nasal chambers once or twice daily, in order to avoid the onset of the attack. While the serum quickly neutralizes the effects produced by the toxin, yet in the small number of cases of hay fever reported it is impossible to state whether it will arrest all the symptoms when the affection has once made its appearance, or whether the results obtained will be lasting. It is also at present impossible to determine the results obtained by its prophylactic administration in advance of the expected attack; that is, whether it will prevent the actual appearance of the disease, delay its appearance or simply mitigate the intensity of the symptoms. The experience of Semon in this respect is important; as in eight cases of hay fever it seemed a palliative rather than a directly curative measure; and while it gave relief to some, it acted beneficially in postponing the attack in others. He finds it produces immediate disappearance of the subjective and within a few minutes great amelioration of the objective symptoms, and its effects, in some instances, appear to be sufficient to prevent a reappearance of the subjective symptoms, while in other cases repeated use of the serum was required to obtain a return to the normal conditions.

My experience with the serum in hay fever embraces ten cases, the disease being well developed in all when they were first seen; and both on this account and the severity of the attack, they were peculiarly suitable to test the value of the serum, as any results from its administration could be readily ascertained. I used the antitoxin made from the serum of animals inoculated with the pollen toxin of golden rod, and employed it both in the form of the serum and as a powder.

CASE 1.—Male, aged 25 years. Hay fever for 9 years. The attack came on August 16, and he received the antitoxin on the 29th. A drop was instilled into each eye and 2 drops into each nasal chamber with immediate relief. Gradually the congestion disappeared, the nasal mucosa resumed less of a "water-logged" appearance, and within $\frac{1}{2}$ hour no objective or subjective symptoms remained. The effects of the antitoxin lasted for about 12 hours and then the itching, sneezing, lachrymation, etc., reappeared as before. He was given the antitoxin to use whenever symptoms of irritation manifested themselves, and after instilling the serum into eyes and nose once or twice daily for 10 days the affection disappeared entirely.

CASE 2.—Male, aged 22 years, with hay fever of 4 years' standing, with its onset about the middle of August; presented the same result as the former patient.

CASE 3.—A boy, aged 19 years, with hay fever of 3 years' duration, appeared the same time as the other cases, received the serum in the same way, with complete relief from 5 to 6 hours at a time, when it was again necessary to reapply it. It was necessary, however, to use the serum well into October, when the disease disappeared as usual.

CASE 4.—B. S., male, aged 43 years, Uses tobacco and alcohol to excess. This is the fourth year of his hay fever, which commenced the first week in August. He was seen September 3, when he presented aggravated symptoms of the affection, with wheezing in the chest, but which had not developed into marked asthma. He stated that he kept his nose clear with a 4 per cent. cocaine solution. The serum produced instant relief of the eye symptoms, but when applied in powder form to the nasal chambers, produced marked irritation and repeated sneezing attacks. On this account it had to be omitted, and after two weeks' use of the antitoxin applied locally two or more times daily, the eye symptoms entirely disappeared, the sneezing and nasal discharge occurred only in mild attacks and the semi-asthmatic disturbance remained unchanged. While he stated that the antitoxin had given him more relief than anything he had ever used, yet at the end of this period alcohol and cocaine won, and he decided to take his chances with them in preference to the antitoxin.

CASE 5.—G. A., male, aged 34 years. Hay fever for 7 years, commencing the last week in August. Treatment initiated two days after the onset, which was quite violent and had in previous years compelled him to leave the city. The serum was used in the eyes twice daily, with entire relief to the symptoms, and the powder in the nose had but little influence and was replaced with the serum, with the result that it produced entire comfort; being used once or twice a week during September, when his symptoms entirely disappeared.

CASE 6.—Adult male, with hay fever of 21 years' duration, coming on August 15 of each year. The serum was used freely in both eyes and nose, but with absolutely no effect, and like other measures used for the same purpose, it proved in this particular case to be an absolute failure.

CASES 7 and 8.—Females, aged 26 and 30 years, respectively. Both had hay fever for 3 years, and in both the attack was inaugurated the last week in August. They were seen one week after the onset, and the dried serum was used in the nasal chambers, 5 to 6 times daily for one week. Except for slight reduction of nasal irritability, no effects of any real benefit were obtained; so this was discontinued and the serum was used, with the result in both instances, that one application in the morning, or when exposed to bright sunlight, would give them entire relief.

CASE 9.—A. M., male, aged 35 years. Has hay fever, with hay asthma to such an extent that it is impossible for him to sleep more than 2 or 3 hours, and then only in a sitting posture. The disease comes on about the 18th of August and has recurred for 10 years. He was seen on September 6 when, on account of the severity of the symptoms, he had temporarily given up his occupation as a clerk. On account of my supply of serum running out, he was given the dried antitoxin to use in the nose, and 2 days later he stated that the powder had reduced the irritation to some extent and had greatly diminished the sneezing attacks, but that it had no apparent effect upon the amount of secretion, nor upon the nasal obstruction. The other symptoms, including the asthma, remained unchanged. He was then given a drop of serum in each eye and nasal chamber, with almost immediate relief of the nose and eye symptoms. This was followed by its application several times daily, and after 24 hours the asthma had so diminished in intensity that he was able to sleep in a natural position for 5 or 6 hours and, in the course of a week, the asthma had entirely disappeared, while none of the symptoms of the hay fever remained but an occasional attack of sneezing, which immediately ceased on the instillation of a few drops of the serum in the nose.

CASE 10.—Mrs. L., aged 40 years. Hay fever for 16 years, with the attack commencing on August 16. She was seen on August 30, and stated that for 2 or 3 hours each day the symptoms were so severe that she had to remain in a darkened room with the windows tightly closed; the attacks being brought on or made much worse when she was in the vicinity of golden rod. The eyes were suffused, there was free

watery discharge, with total anosmia and inability to breathe through the nose. There was also intense itching of the eyes, nose, palate and entire face, with violent attacks of sneezing every few minutes. A drop of the serum was placed in both eyes and nasal chambers and almost immediately the entire symptom-complex disappeared. She was given the dry serum to use as required, and reported one week later that it produced a soothing effect on the nasal mucosa, but the sneezing attacks, while not as frequent, were as severe as before. The serum was then instilled, with entire relief from all symptoms for $1\frac{1}{2}$ days, and by using it herself she was able to keep the disease in abeyance for 2 weeks longer, when all manifestations ceased and she was free from the hay fever several weeks in advance of its usual time of departure.

The results from the serum treatment in these cases, with but one exception, proved most gratifying, and in the only case in which hay asthma occurred it was promptly controlled, the results thus agreeing with those of other observers who have found that the hay asthma was relieved by the application of antitoxin to the nose. It has apparently no effect, however, upon an accompanying bronchitis or semiasthmatic condition not dependent upon the hay fever, as shown by one of my cases previously mentioned. Untoward effects seem to be entirely absent in my cases and the experience of other observers and in whatever amount the serum was employed it has seemed to be perfectly harmless.

While the small number of cases presented is hardly sufficient to base accurate conclusions thereon, yet it is desired, as the result of the experience obtained with the golden rod antitoxin, to suggest that:

- (1) The serum produces prompt and positive amelioration of the symptoms of fall hay fever in the majority of cases.
- (2) In a smaller number this favorable result is soon accompanied with the complete disappearance of the affection.
- (3) Where slight or no action is seen after its use, pollen as an etiological factor does not predominate.
- (4) When results are obtained, it favorably influences all the manifestations of hay fever.
- (5) While I am unable to state from personal experience the effect of the serum upon hay fever occurring at other times

of the year, or upon its effects when administered in advance of the attack, yet when given during the attack, irrespective of its severity, it produces marked palliation rather than absolute cure.

(6) Its effects upon future attacks remain as yet unknown.

(7) The serum in powder form is slightly soothing to the nasal mucosa; has but little influence upon the other symptoms of the affection, and in occasional cases it may act as a direct irritant.

Finally, as a result of larger experience, especially with hay fever occurring at other times of the year, it may become necessary to modify some of the opinions in regard to this antitoxin.

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INTERNAL HEMORRHAGE IN A CASE OF TYPHOID.

TREATMENT WITH ADRENALIN AND ACETOZONE.

BY C. E. GILLIATT, M. D., ALLENDALE, ILL

A male, 18 years of age. Family history: father died of pulmonary hemorrhage; mother died in labor. I first saw the patient October 8, 1903. The disease ran the usual typhoid course until October 31, when the patient, while at stool, passed over a pint of pure blood. I was called and gave him a hypodermatic injection of morphine and atropine, and directed the application of a cold pack to the abdomen.

The following morning I returned with a bottle of adrenalin and gave him fifteen drops, leaving instructions to repeat the dose every three hours. While I was present some blood was passed, but none appeared after the administration of adrenalin. The bowels were locked up for six days and then opened by enema. A solution of acetozone, 40 grains to three quarts of water, was given, with the adrenalin, for a week, the patient making a slow convalescence. I attributed the boy's recovery to adrenalin.

SCARLET FEVER.

BY WM. HENRY, M.D., HARMON, ILL.

This is a disease which is both contagious and infectious—it is contagious because the disease may be contracted by contact; infectious because particles may be carried by floating in the air. There are three degrees of the disease, a mild simple form and a severe type, and a malignant form which almost invariably proves fatal. It is characterized in the incipency by headache, fever and vomiting, being followed by a rash sore throat; there is a red strawberry tongue coated in the center; there is nervousness, high fever, the temperature as high as 106 and 107 degrees, the temperature may keep up for several days, the glands in the neck may become enlarged and painful and may form abscesses; usually there is constipation, the urine becomes high colored and does not flow freely. The rash extends all over the body; it usually commences about the neck. Small children may be taken with spasms. I attended one case of a little boy, about two years old, who did not seem to be very sick, but who took a spasm and never came out of bed, but died in the spasm. Some become delirious and are very restless and will not sleep at night or day. Sometimes the tonsils become swollen and ulcerate. There are many ways of prevention; one is to keep other children away from the sick patient; fumigating with sulphur is a good thing. I believe that the giving of sulpho-carbolate of soda will keep the well ones from taking the disease. The past month I attended the case of a little girl, about twelve years of age, who was taken with scarlet fever. I kept her away from the remainder of the children and fumigated the house with sulphur and kept a dish of carbolic acid and water heated nearly to the boiling point on a stove which kept a vapor in the room all of the time; at the same time I gave the patient tincture of aconite for the fever and solution of chlorate of potassa as a gargle for the throat; at the same time she was taking sulpho-carbolate of soda, the other children were also taking the sulpho-carbolate as a preventive, and it is now a month and none of them has been taken down with the disease.

The family were quarantined for about three weeks and thus far there has been no new cases of the disease in the town. After

the fever had left the girl, her lower extremities became swollen and painful, so much so that she could not walk. For this I coated the limbs all over with antiphlogistine and rolled them in cotton and left them for forty-eight hours ; after removal of same, the soreness and swelling had all gone and has not since returned. She is now convalescent and getting well without any sequela thus far.

THE NECESSITY FOR AN EARLY DIAGNOSIS IN THE PREVENTION OF DEFORMITIES.*

* BY REGINALD H. SAYRE, M.D., NEW YORK.

Orthopedics as defined by Audry,[†] the first to use the word in 1741, is the art of preventing and correcting deformities in children.

If the art of preventing deformities were well understood at the present time, the majority of the cases that now visit the orthopedist would not have the unsightly figures they possess.

With the exception of congenital and traumatic deformities, there is a long interval between the commencement of the disease, which gives rise to the distortion and the appearance of the latter, but it is rare for patients to visit the orthopedic surgeon until the deformity has become marked, and very often irremediable.

In no department of surgery is the old adage, that prevention is better than cure, so fully realized as in orthopedics, and the majority of the operations that the orthopedic surgeon is called on to perform would be rendered unnecessary had adequate treatment been instituted sufficiently early.

For instance, take a congenital talipes equinovarus. If proper manipulation to correct the deformity is begun at birth and retention in the improved condition maintained, it is extremely rare for the deformity to be present by the time the child is old enough to stand ; and if his feet have been brought into a proper position before this, each step he takes serves to push them in the right direction, while, on the contrary, if they have

* Read by invitation before the Philadelphia County Medical Society, Oct. 28, 1903.

[†] *L'Orthopedie ou l'Art de Prevenir et de Corriger dans les Enfants les Difformitees du Corps.* Par M. Nicolas Audry, Conseiller du Roi, 1741.

been allowed to stop short of full correction, each step tends still further to increase the deformity, and the longer time that weight is borne on the foot in an improper position the more difficult it is to effect a perfect cure.

The Chinese take a normal foot, and by infinite patience and perserverance and a bandage succeed in producing a marked deformity. The same patience and perseverance and a bandage properly applied in infancy are capable of curing almost every congenital clubfoot without further interference; and yet at the International Medical Congress recently held at Madrid the statement was made that these cases should not be touched for several months, as there was a possibility that the deformity might correct itself if left to nature. The statement that children will grow out of it has done more harm than can possibly be imagined, and until it ceases to be employed good results will not be secured.

The constant tendency is not to "grow out of" deformities but to "grow into" them, unless the cause that produces the deformity is removed, and the orthopedist requires the aid of the family practitioner in detecting the existence of disease at the earliest possible moment, in order that proper treatment may be immediately commenced, instead of waiting until the deformity has become pronounced and then endeavoring to cure what should never have been allowed to occur.

Take, for example, a case of rickets: Why wait for the occurrence of bowlegs and knockknees or a curved spine? The large epiphyses, the sweating of the head, the irregularity in teething, the delayed ossification of the fontanelles, the enlarged abdomen and evidences of malassimilation of food, one or all of these symptoms will be present to warn us of danger, and if these warnings are heeded it will seldom become necessary to resort to osteotomy or osteoclasia to cure deformities, as they can usually be prevented from occurring.

In infantile paralysis, we find one of the largest fields for preventive surgery. Some of the most intractable deformities have their origin in the disturbed equilibrium of the muscles controlling the distorted joint, and from weight-bearing while the joint is held in an improper position. If a growing bone is subjected to constant pressure in an abnormal direction, its growth will be abnormal, and after it has developed along

these abnormal lines it is often impossible by any operation to attain either symmetry or good functional use of the joint.

Children who have been afflicted with paralysis of any sort should be most carefully watched, and, if any tendency to deformity is observed, proper means should at once be taken to hold their growing bones in as nearly a normal position as possible until they have become ossified.

To render these general statements more definite, let us suppose a case of anterior poliomyelitis, in which the anterior and posterior tibials and the quadriceps extensor cruris have been paralyzed. As a result the arch of the foot gives way, the foot is everted, the astragalus becomes prominent, and often we have marked genuvalgum. The hamstrings, unopposed by the quadriceps, displace the tibia backward, the biceps rotates the foot outward, and from its constant pressure on the outer side of the knee joint the external condyle of the femur at times becomes almost completely absorbed, and the lower surfaces of both condyles altered in shape, so that the articulation *looks* backward and downward. Even though the direction of *the leg* is straightened by osteotomies, the articulating surfaces *are* often so altered in contour as to impair locomotion still *more* than the paralysis would have done, had the bones been *held in* proper position by apparatus during the child's growth, *and so* compelled to develop in a nearly normal manner.

If a torticollis is allowed to remain uncorrected for a number of years, in consequence of the patient's constant efforts to adapt himself to the crooked position of the head, there is almost certain to be a distortion of the face which is very apt to be permanent, and quite frequently a lateral curvature of the lower part of the spine is caused by efforts to twist the face straight.

Lateral curvature of the spine is one of the bugbears of orthopedic surgery, and above all other distortions emphasizes the necessity for heeding Audry's definition of orthopedics, "The art of preventing and of curing deformities."

"The art of preventing!" If the general practitioner would only pay a little attention to this most important art, how much good he would do! It seems that we are just beginning to realize that many of our diseases are preventable. The layman, as well as the physician, knows it is much more practical

to prevent typhoid fever than to cure it. Many articles are written on preventive medicine, and we are told that this is to be the feature of twentieth century practice. I trust it may be, and that the prevention may embrace surgery as well as medicine, and orthopedic surgery as well as general surgery.

The day of the man who tells the mother that a child will grow out of a lateral curvature of the spine, and that the deformity is so slight as to amount to nothing, should have passed by long ago, but unfortunately it has not, and until it is fully recognized that every deviation of a spine from the normal is a serious matter, calling for careful supervision of the growing child, we will continue to see cases of frightful and unnecessary deformity.

Whenever a mother brings a child for examination because its body does not seem to her to be quite normal, you may be almost sure that she is correct, and before you give an opinion to the contrary take time to strip the child and examine it at your leisure. Do not do this in a hurry if you would avoid error, and if you are pressed for time appoint another occasion when you can give the case your attention, as these patients often hold themselves perfectly straight when first examined, and time must be allowed for them to become accustomed to their surroundings, when they will allow their muscles to relax and the body to assume its ordinary attitude. If you have not time to wait for this relaxation you will be deceived and not give a correct opinion. One of the first things noticed is an apparent elevation of one hip. Careful measurement will probably show that both legs are of equal length, and the iliac crests are at equal distances from the floor, but the twist in the lumbar spine and the change in the position of the ribs have so altered the contour of the waist as to produce the appearance of an elevated hip. Sometimes this is more noticeable from the front and frequently there is a greater fulness of one side of the abdomen than the other.

Another place in which the commencement of a lateral curvature is often noticed is the space between the body and the arms, as the latter hang by the sides. If these spaces are not symmetrical, look the patient over with great care, for something is sure to be wrong.

The scapulæ also are ready to give warning of trouble very early in the commencement of spinal rotation, and if either one looks more prominent than its fellow, or not on the same level, make the patient bend forward with the arms drooping toward the floor and carefully examine the contour of the ribs, which will be thus exposed by the scapulæ sliding forward along the thoracic walls. At times it will be easier to detect irregularities of the two sides by palpation than by inspection, and you should never neglect to pass your hands over both sides at once.

In front, the distance of the nipples from the umbilicus should be noticed and also the comparative size of the breasts. Irregularities here are among the early signs of rotary lateral curvature.

While the elevation of one hip noticed by the parents is often only apparent, it does not follow that it is always so, and shortening of one leg is often a cause of lateral curvature, notwithstanding the statements of some text-books that it is immaterial and may be disregarded. It may and does give rise to rotary lateral curvature of the spine.

In Pott's disease of the spine we meet with another marked illustration of the necessity for an early diagnosis if we wish to prevent deformity. The disease is present months and sometimes years before the deformity, and gives rise to such marked symptoms that its presence can only be overlooked through inattention. Many a time the diagnosis of an inflammation of the vertebræ may be made simply from observing the attitude of the patient before removing the clothes; the careful gait, anxious look in the eyes, drawn expression of the mouth, stiff carriage of the head on the trunk, and shortened respiration proclaiming as clearly as possible the presence of vertebral inflammation. Whenever a joint is inflamed, nature tries to protect it and prevent it from motion, and there is an involuntary spasm of the muscles controlling this joint which limits its motion to a greater or less degree. This phenomenon is manifested very early in Pott's disease, and, combined with the effort to prevent concussion, gives rise to the peculiar gait characteristic of this malady. If the disease is situated in the cervical region the attitude may resemble very closely that of torticollis, but may be differentiated from it by the muscular

spasm and the pain on movement, and is usually accompanied by a slight elevation of temperature. In the upper thoracic region we find usually elevation and rigidity of the shoulders, while in both places the lesion is often accompanied by a peculiar sharp, grunting respiration that at times may be mistaken for the sound produced by a foreign body in the upper air passages. When the disease is situated in the lower thoracic region, we often meet with a peculiar position of the head, which is thrown as far back as possible, sometimes till the face looks directly upward, in order to remove the weight, as far as possible, from the front part of the vertebral bodies and transfer it to the transverse processes. In this part of the spine we sometimes see contraction of the abdominal muscles which gives a peculiar appearance, as if a string were tied around the body. The pains which accompany Pott's disease are almost always referred to the distal extremities of the nerves which leave the spine at the point of the inflammation, while it is very rare for the pain to be located in the back. In consequence, these patients are often treated for worms, colic, indigestion, and stone in the bladder for months without any suspicion that the source of trouble is in the spine.

At times there may be a question as to the diagnosis between Pott's disease and lateral curvature of the spine, as a lateral deviation is present in the former trouble much more frequently than is usually believed to be the case. The importance of a correct diagnosis becomes doubly manifest when we consider that Pott's disease requires absolute quiet of the spine, while lateral curvature demands gymnastic exercises. Those who have had but slight acquaintance with spinal diseases imagine that it is impossible to confound those two diseases, but those who have seen the largest number of cases will be the first to acknowledge that at times it is very difficult to make a differential diagnosis in incipient cases. Therefore, if you find a slight increase of temperature in a doubtful case especially if there is any suggestion of muscle spasm, err on the safe side, treat it as Pott's disease, and protect it from motion until time has cleared up the diagnosis.

Just as in inflammation of the spine we do not find pain or deformity in the spine till late in the progress of the disease, as a rule, so in hip-joint disease it is rare for the patient to

complain of pain in the hip at first. Usually the pain is referred to the knee on account of the termination there of a branch from the obturator nerve, which also supplies the hip joint. It is also common to find the pain referred to the large toe, and patients are not infrequently brought for examination by parents who imagine there is something the matter with the foot or that the toe has been injured by a nail in the shoe, whereas the real situation of the trouble is in the hip joint. Another early diagnostic point, which is often neglected, is the presence of spasm in the muscles of the calf on the side of the affected hip.

The earliest manifestation of joint inflammation is probably the involuntary spasm of the muscles controlling the joint, and it is doubtful if inflammation is ever present without this symptom. It is the first to appear and the last to subside. As long as it is present the joint requires protection. This spasm produces very slight restriction of motion at first, and may not be detected unless time is allowed for the patient to become relaxed after being stripped. The first step in the examination of a patient in whom disease of the hip joint is suspected, is the complete removal of the clothing. Many cases are not detected early because they are not examined thoroughly. Almost the first symptom noticed, after time has been allowed for the patient to relax the muscles, will be that the weight is borne largely on one leg, the other being slightly flexed at the hip and knee; the leg will also be slightly abducted and rotated slightly outward. There is almost always a slight synovitis in these cases, and as the capsular ligament is relaxed by flexion, abduction and eversion, and thus can contain a larger amount of fluid, the hip involuntarily assumes this position.

As the disease progresses these deviations from the straight line become more and more marked, but later on, if the joint capsule has been ruptured, may be replaced by adduction instead of abduction, and an apparent shortening instead of a lengthening of the affected limb. The buttocks also afford a means of diagnosis, that on the affected side being lower than its fellow and the gluteofemoral crease not so well defined.

After examination in the standing position the patient should be placed on the back on a table or on the floor. A bed will not answer, as its soft surface will obscure slight deviations from the normal which are essential to a diagnosis.

The back should be placed so that the spine touches the table throughout its entire length, and the pelvis placed so that a line through its anterior superior iliac spines will be at right angles to a line passing through the centre of the sternum, umbilicus and symphysis pubis. The sound leg should then be grasped firmly and the thigh flexed on the abdomen as far as possible, abducted, adducted and rotated, the patient being urged at the same time to relax all its muscles as completely as possible, observing the range of motion. The same should then be done with the lame leg, and any limitation of motion as compared with the other side noted. If there is inflammation of the joint, there will be restriction of motion, and at times there will be a muscular spasm, that, once recognized, can never be mistaken for anything else. If there is contraction of the psoas muscle, it will be impossible to bring this leg flat on the table without causing tilting of the pelvis, and it may be impossible to bring the legs in a straight line with the trunk without disturbing the relative positions of the interiliac line and the line through the centre of the body.

The fact that pain is not caused by these motions does not bar out the presence of inflammation in the joint. The motion permitted by the muscle spasm is within the range that would cause pain, and there is no necessity of forcing the limb beyond that limit, and so producing pain in order to reach a diagnosis. If the disease has progressed to such a point that slight movements of the joint give rise to pain, much valuable time has been lost; examination of such a case at a much earlier period would have shown the presence of inflammation, and the application of suitable treatment have prevented the further development of the disease.

Another complaint that supplies the orthopedist with cases that are most unsatisfactory to treat is sciatica, when it results from tuberculosis, or other disease of the lumbosacral and sacroiliac articulations. If it were recognized that sciatica is but a name for a condition produced by a variety of causes, and efforts made to determine the origin of the pain in the sciatic nerve, many cases of bone tuberculosis would be recognized much earlier than they are at present. The attitude of a patient with inflammation in the sacroiliac synchondrosis is so typical that, once seen, it can never be mistaken, and serves to differ-

entiate the case from hip-joint disease, should the location of the pain or other symptoms give rise to any doubt. The body is bent away from the affected side, and a peculiar twist given to the spine that must be seen to be appreciated.

The knee is the seat of many kinds of inflammation, and if it were universally the custom to regard as serious all injuries of this important joint, and give it immediate rest, many cases of chronic inflammation would be prevented. As it is, many slight sprains are allowed to go without protection for weeks and months, because they do not give rise to great inconvenience, and it is not until a chronic synovitis, with decided deformity and perhaps erosion of cartilage, has taken place that the case is thought sufficiently serious to require protection and crutches.

Whenever there is slight synovitis in a knee, and especially when the traumatism has been but trivial, be on your guard. Immobilize the knee and put the patient on crutches, or, if it is a child who cannot be trusted to use them, apply a splint that will prevent motion, and keep the weight from the joint.

These same principles apply to all the other joints of the body but these joints seem to receive more attention at the hands of the general practitioner, and so do not give rise to so much subsequent trouble. The sprained ankle is regarded as a worse thing than a fracture by common consent, and is usually treated promptly and efficiently, while the joints of the upper extremity are usually protected, because this does not involve so much discomfort in the patient, and so is insisted on many times when it would not be if the lower extremity were involved.

Let us hope that the time is not far distant when the first indications of inflammation in a joint will be promptly recognized and as promptly given adequate protection, so that the first deviations from the normal in the bodies of growing children may receive attention and be arrested and prevented from increasing. If this is done by the family doctor, we shall have taken a long step forward toward relieving the world of the great mass of deformities that are now so common.

THE ST. LOUIS Medical and Surgical Journal.

A. H. OHMANN-DUMESNIL, A.M., M.D.,

Editor and Proprietor.

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EDITORIAL.

MUD SLINGING IN EXCELSIS.

Some people have such a poor conception of business that their highest ambition is to employ the methods in vogue with fish-women at a market. They do not prove the claimed superior worth of their products by clinical and chemical demonstration, but prefer to resort to mud-throwing and under-hand work. They will not come out in the open and disclose themselves like a fair enemy, but they sneak about bush-wacking and trying to take shots at the back of an honorable opponent instead of facing him. We are led to make these few desultory remarks by the attempts which some unscrupulous parties have made to belittle that well known standard iron preparation, Gude's Pepto-Mangan. Whilst not attacked by name, so many covert allusions are made that any one who can read between the lines will certainly know that these small attacks are directed at Pepto-Mangan (Gude). In another editorial in this issue will be found what the *Medical and Surgical Reporter* has to say on the subject.

Of course every right-minded person will not hesitate to condemn such methods and every fair-minded man will share in this sentiment. Underhand methods are unbusiness-like and are really a confession of weakness and really a *petitio in forma pauperis*. We cherish the hope that those guilty of such reprehensible conduct will mend their ways and endeavor to so manage their business affairs that they will receive words of praise instead of those of condemnation. We cannot refrain from telling our readers that Gude's Pepto-Mangan still remains the best organic iron preparation, and it bids fair to retain this much deserved reputation for many years to come.

AMERICAN MEDICAL ASSOCIATION MEETING.

The coming meeting of the Association is not yet referred to with that enthusiasm which it should evoke, but this lack of warmth is no doubt due, so far as the Mississippi and the West and Southwest are concerned, to the fact that the World's Fair at St. Louis is so near its opening. Physicians are very much the same as the mass of the people, and are more anxious to see the "big show" than go to a medical convention. In the East there will be a heightened interest for the reason that the medical meeting will occur at their very door and there will exist ease of reaching the locality, as well as the conveniences and pleasures of a watering place at a season when it is not crowded. We do not desire to argue that the profession West of the Alleghanies will not be represented, and the proportion lacking from this district will not be more than made up by those from the East, but we do maintain that a point near St. Louis would have attracted a larger number from all directions, as it would have afforded them an opportunity of visiting the St. Louis World's Fair.

That Atlantic City is fully prepared to receive all who may come, in an adequate manner, is beyond all question. We give a list of the hotels at this locality in another part of the present issue of the JOURNAL. The prices are moderate, so that the item of cost can exercise no deterrent influence upon those who contemplate attending the meeting. There really is no reason why there should not be as equally a large, if not a

larger attendance at Atlantic City than there was at New Orleans. All conditions will be favorable to this and the few who do not come will find that they will be more than counter-balanced by the many who will.

All the members of the medical profession who are located East of the Mississippi River will find that the matter of transportation is one of very easy solution. There is a railway line which is unsurpassed for rapidity, safety and comfort, and which makes travel over it a pleasure as well as a delight. All our readers know that we refer to the Baltimore and Ohio Southwestern, which does not propose to let any other railway be its superior so far as the transportation of passengers is concerned. All that it is possible to do in the passenger department of a railway line is being done by this road, and the improvements which are being daily made is certainly evidence of this fact. Our readers must not forget one fact, however, which is that all these advantages are not exclusively reserved for those East of the Mississippi River. Those who are located West of it may participate in the same advantages by having their tickets read *via* the Baltimore and Ohio Southwestern. We are certain that none of our readers will ever have cause to regret having chosen this line as the medium of his transportation.

WHEN YOUR CASE IS WEAK ABUSE THE OTHER SIDE.*

This maxim has been a favorite standby with the legal profession from time immemorial, and unfortunately certain pharmaceutical manufacturers have recently seen fit to make use of that maxim. This is particularly true of the manufacturers of a certain iron preparation.

The impudence and effrontery with which these people try to hoodwink the medical profession is rather remarkable.

No other preparation ever came before the medical practitioner with so little detail as to methods of preparation, composition, therapeutic effect, etc., etc., and nevertheless the profession is asked to accept the wildest and most extravagant statements as to its wonder-working capabilities. This is not all. The makers of this preparation, in seeking the support of

* Editorial in the Toledo Medical and Surgical Reporter, April, 1904.

the profession covertly attack and sling mud at all other iron preparations that have been before the profession for years. They single out Pepto-Mangan, a combination which has stood the tests of the leaders in the scientific medical world both here and abroad, an organic iron combination in which, in its results, the general practitioner and the hospital clinician have learned from experience to place implicit confidence.

This unbusiness-like method of attempting to cast discredit upon other reliable and thoroughly tested combinations we cannot term otherwise than despicable, and furthermore we know our readers cannot be influenced by unsupported statements of financially interested parties, but will always bear in mind that Gude's Pepto-Mangan was submitted to the profession as an organic iron product, and the results obtained by its use, as also the scrutiny of analysis by chemists of repute, substantiate all that has ever been claimed for it.

Attempting to foist upon the attention of the physician a product simply by insinuation that known articles are inferior, is a manner of doing business which should receive the stamp of disapproval by every one of our profession.

The American Gastroenterological Association will hold its seventh annual meeting at Haddon Hall, Atlantic City, N. J., June 6 and 7, 1904. A leading feature will be a symposium on Gastric Ulcer, which will occupy three sessions and be introduced by Dr. J. C. Hemmeter.

The Tenth International Congress of Ophthalmology is to be held in Lucerne, Switzerland, September 13, 14, 15, 16 and 17, 1904. The official reception of members will take place in the evening of September 13. The mornings and afternoons of the 14th, 15th and 16th will be occupied with scientific work. On the 17th an excursion will bring the congress to a close.

BOOK REVIEWS.

A System of Physiologic Therapeutics. A Practical Exposition of the methods, other than Drug-giving, useful for the Prevention of Disease and in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A.M., M.D. Vol. VIII. Rest, Mental Therapeutics, Suggestion. By FRANCIS X. DER-CUM, M.D. Ph.D. 8vo. pp. 332. [Philadelphia: P. Blakiston's Son & Co. 1904. Price by Subscription only: Eleven Volumes, cloth, \$27.50; half-morocco, \$38.50.

This volume is certainly entitled to rank among the best which so far have appeared in the System of Physiologic Therapeutics. The author has demonstrated in this, that he is master of his subject and he handles it both in a thorough and competent manner. The book is divided into three parts, dealing respectively with Rest, Therapeutics of Mental Diseases, and Suggestion. In Part I. the subject matter is of the highest importance and is deserving of more than passing attention and study of a superficial character. Our readers will no doubt remember the classic work of Hilton on Rest and Pain, a work which to this day has not lost either its interest or its value to both the physician and the surgeon. In the volume before us the author has elaborated upon his predecessor's work and presents us with a more modern view upon the subject from a purely therapeutic point of view.

In his consideration of rest as a therapeutic measure the author does not entirely set aside drugs, but he advocates but few, and these only in special conditions. Part I., devoted to rest, is divided into six chapters, in each one of which the subject is considered in an analytical manner. In Chapter I. Function and its Results are considered; among other things the toxic action of waste products. Chapter II. deals with Chronic Fatigue—the Fatigue Neurosis, which is accompanied by motor, sensory, psychic, and visceral phenomena. In Chapter III. is taken up the subject of Rest in Neurasthenia and Allied States. This contains a thorough consideration of the subject and is certainly of superior value in view of the sidelights cast upon it by the author. Hysteria is the subject of Chapter IV. and it is here that the author demonstrates his ability to handle his subject in a masterly manner. In Chapter V. Hypochondria forms the subject, and the differentiation of hypochondria from other neuroses is given in a manner which is easily understood and demonstrative as well. The author very justly points out that it is a very important subject which has been too much neglected. It is particularly in the methods he gives of the management of children, who show indications of hypochondria, that he excels. Chapter VI. although not a

long one is very useful, dealing as it does with the Application of Rest in Chorea and other Functional Nervous Diseases; and in Organic Nervous Diseases. A most excellent chapter, which is well written.

Part II. is on Therapeutics of Mental Diseases, considered in two chapters. Chapter I. is on the Prevention of Insanity and the General Principles of the Treatment of the Insane. This is a comparatively short chapter in view of the fact that the Treatment of the Special Forms of Mental Diseases is taken up in Chapter II. The entire part could certainly be made longer and more elaborate were it not for the restrictions placed upon the author. Short as it is, it certainly covers the ground pretty fully and in a thoroughly competent manner. Part III. on Suggestion is disposed of in two chapters. Chapter I. is on Normal Suggestion, which the author looks upon as being within the legitimate sphere of therapeutics. In Chapter II. he speaks of Suggestion by Mystic and Religious Methods; Suggestion under Artificially Induced Hysteria—Hypnotism. Under the mystic and religious methods he includes Shamanism, Faith Cure, and Eddyism. He warns amateur hypnotizers against the baneful effects which will be exerted upon themselves.

From the above meager description of the contents of the volume before us it will be readily seen that it is interesting as well as instructive in the highest degree. The high standard of the work has been preserved throughout the successive volumes as they appeared, and we have no fear that the one which concludes this truly monumental work will not share this excellence. The names of the authors who will contribute to it are a sufficient guarantee of this; and we desire to congratulate the publishers upon having carried out their work so successfully up to the present moment.

A Manual of Clinical Diagnosis. By means of Microscopical and Chemical Methods. For Students, Hospital Physicians, and Practitioners. By CHARLES E. SIMON, M.D. Fifth Edition. Thoroughly Revised and Enlarged. 8vo. pp. 695. Illustrated with 150 Engravings and 22 Plates in Colors. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, \$4.00, net.

Within comparatively a few years diagnosis has been brought to a scientific basis, and what was formerly a comparatively crude and imperfect method has been reduced to an exact and positive one. This has been in a large measure due to finer and more elaborate instruments of precision as well as to improved as well as new methods of technique. To-day a supposition is no longer admitted; it must be a proven fact, based upon indubitable evidence. All methods must be exact

and, as a natural consequence, the deductions which are made share in this exactness and are of such a nature that implicit reliance may be placed upon them. Naturally, diagnosis shares in these advances as well as advantages and becomes exact in an equal degree. As a natural corollary to this, treatment becomes more intelligently directed and empiricism becomes relegated to that oblivion which it deserves. Having therapeutics improving *pari passu* with methods of examination and diagnosis, we are approaching that goal so long sought by the medical profession of making medicine a science instead of an art; and it is books of the nature of the one before us which are destined to work this change.

Dr. Simon has certainly produced a work of more than ordinary value and that it has been appreciated is manifested by the fact that it has reached its fifth edition inside of eight years, the fourth having been completely exhausted in two. We have no doubt, whatever, that this great popularity was attained through the fact that the author's object has been successfully carried out by him—that of furnishing exact methods of diagnosis which can be easily understood and which are susceptible of being carried out in their practical application by every student and practitioner. None of the methods which are given are either complicated or abstruse, and their very simplicity is what recommends them when it is taken into consideration that they accomplish the object of supplying exact methods of diagnosis.

In the present edition, besides a careful revision, many additions have been made. The chapter on the blood has been enlarged by sixty pages and almost entirely rewritten, so that it represents the principles of hemology as they are known today, with the latest advances made in this subject. The chapter on technique has been written in a manner which evidences that special pains have been taken in its preparation. In connection with this a special chapter dealing with the nature of anilin dyes and the principles of staining has been introduced, and it is by no means the least valuable in this work, inasmuch as it will prove of the highest value to the clinical laboratory worker. The author, for the convenience of reference, as he states, has re-arranged the subject of leucocytosis in such manner that hyperleucocytosis and hypoleucocytosis are separately considered in connection with the different varieties of leucocytes. A new section which has been introduced deals with the kryoscopic examination of the blood.

The bacteriology and parasitology of the blood have received additions, with sections on paratyphoid fever, gonococcus septicemia, bubonic plague, trypanosomiasis, and spotted fever. In fact, all the text has been thoroughly brought up-to-date and in line with the latest scientific discoveries, the results of re-

search and study by those most competent to carry on such work.

This book is one which is a whole library within itself and its value does not lie entirely in that it can so thoroughly teach the principles and practice of scientific clinical diagnosis, but it is as well an educator which will enable him who studies it to understand thoroughly the advanced work of others in the field of diagnosis and medicine. The publishers have been liberal in the matter of figures and plates, all of which are drawn and colored in an irreproachable manner. The press-work and binding are most excellent, and we have no doubt that the present edition of Dr. Simon's great work on clinical diagnosis will enjoy a greater usage than previous ones have.

The International Medical Annual. A Year Book of Treatment and Practitioners' Index. By Thirty-two Contributors. Twenty-second Year. 1904. 12mo. pp. 770. Illustrated. [New York: E. B. Treat & Company. 1904. Price, \$3.00.

This is beyond doubt one of the standard annual medical publications which gives a thorough review of the progress made in medicine during the past year preceding its publication. The contributors have always done their work faithfully, and this has resulted in the production of and introduction to the medical profession of the useful Annual before us. It may be truthfully said that, although the present issue is larger than any of its predecessors, it has not deteriorated one whit in its value, but rather the contrary. This cannot fail to prove being a pleasure to its readers and a source of more than ordinary satisfaction to the gentlemen who have contributed to its pages, and a just matter of pride to its publishers, who have done everything in their power to produce a work in which they have spared no pains or expense. We have examined this last issue with more than ordinary care, and find that it not only presents a most complete and thorough index of treatment, but also furnishes a number of special articles from the pens of authors regarded as most competent authorities on the subjects of which they write.

The volume before us contains many special features of more than ordinary importance. We are treated to a general review of therapeutics which is very valuable in its discussion of new remedies and methods of medication. The author is very temperate in his views, and none the less exact and reliable. Following this is a dictionary of remedies which cannot but prove useful, in the highest degree, to the physician who is desirous of acquainting himself with the nature and action of the newer remedies which he may wish to use. After this we are presented with a very thorough review of the subjects of radio-activity and electro-therapeutics. This cannot but prove

most interesting to all the readers of the Annual, as the present is, beyond all doubt, the period of radio-activity in medicine. The studies made of radium, the Roentgen-ray and other electro-therapeutic methods has almost revolutionized therapeutics in many respects, although we only know the very beginnings of the subject, and further development will be necessary to place us on a firm basis. A good general review of medicine and surgery precedes the dictionary of treatment. This really constitutes the body of the work.

Among the more notable features to which we desire to call attention are the articles on anesthesia, the brachial plexus, and the ear, which is specially illustrated by a series of twelve stereograms. Gastric disorders, splenic anemia, and Banti's disease are the titles of articles deserving of more than ordinary attention. The book closes with a well considered chapter on sanitary science, in which the author very fully demonstrates that it is a science, and somewhat more than was formerly designated as hygiene and more deserving of serious study.

A feature which will attract more than ordinary attention is the illustrated articles on small pox, varicella and other infectious diseases; as also that on the antitoxin eruption. In all of these the plates, which are quite numerous and in some cases in series, clearly show the nature and distribution of the eruption, and this of itself is of the greatest value to the general practitioner.

The work, taken altogether, is of a value not to be underrated. The plates are numerous and well executed, and those in colors are certainly to be most highly commended as being true to Nature in their tints and drawing. The other figures are also good, although comparatively not so numerous as the plates, which amount to thirty-four, the former being but thirty-eight. The publishers have certainly been very liberal in this respect. The printing, binding, and general mechanical execution as well as paper are above the average. This volume should have a large sale in view of the fact that the price has been made so reasonable.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., assisted by H. R. M. LANDIS, M.D. March 1, 1904. 8vo. pp. 337. Illustrated. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, per annum, in four cloth-bound volumes, \$9.00; in paper binding, \$6.00, carriage paid to any address.

This present volume of *Progressive Medicine* is one which marks a new era in the publication of this sterling series on the progress in medicine. The publishers issue the volumes

in paper binding at a reduced price, a course which will please many subscribers and, at the same time, enable them to have them bound in a style more pleasing to them as well as more uniform with other volumes in their respective libraries. In all other respects the volumes are exactly alike. The system of issuing medical works in paper bindings is the custom on the Continent, and no one ever expects to receive books from French, German, Italian, or Austrian publishers except in this form.

In the volume before us, *Surgery of the Head, Neck and Thorax* is passed in review by Dr. Charles H. Frazier. He goes into a rather lengthy consideration of the surgery of the skull and brain, in which field surgeons have been rather active during the past twelve months. The mouth, the neck and the mammary gland are also accorded some considerable space, and this in view of the fact that all of these have had much attention devoted to them recently by surgeons.

The review of the progress made in the study of Infectious Diseases, including Acute Rheumatism, Croupous Pneumonia, and Influenza, by Dr. Robert E. Preble, is thorough and well considered. He gives a very interesting account of the manner of transmission in cases of infectious diseases. Diphtheria and malaria, as well as pneumonia, come in for quite a share of attention; scarlet fever, tuberculosis, and tetanus, as well as typhoid fever, are noticed in proportion to their importance. Dr. Floyd M. Crandall gives a good account of the progress made in Diseases of Children. The new-born infant, infant feeding, diseases of the alimentary tract, and of the respiratory tract, are passed in review and pretty thoroughly considered. Diseases of the heart and of the urinary tract also receive a share of attention. Laryngology and Rhinology are considered by Dr. Charles P. Grayson. He writes a short review on paraffin prosthesis. A number of subjects, such as hay fever, atrophic rhinitis, and prolonged intubation are passed in review. The operative treatment of malignant disease of the larynx is reviewed at some greater length, and it is a subject of some importance at the present moment in view of the views of some surgeons in regard to the condition of the throat of the Emperor of Germany. Dr. Robert L. Randolph gives us an interesting digest in connection with Otology. He begins with a review of the literature on the external ear, following this with a larger review of diseases of the middle ear. This is comparatively long and followed by the diseases of the mastoid which concludes this volume. The editor continues to express his conservative position in regard to the radical mastoid operation and finds that good authority backs him in this opinion.

We certainly cannot give this volume of *Progressive Medicine* an adequate review, as space prevents our entering into an analysis of its many good points. That he who gets this work will never regret the investment we feel sure, and we would encourage those who have never had the work to obtain it, and read it, as cannot fail to be of profit to them.

Manhattan Eye and Ear Reports. No. 3. March, 1904. 8vo. pp. 186. Illustrated. [Manhattan Eye and Ear Hospital. 1904.

This is a publication of the highest value and one which should be in the library of every oculist, aurist and throat physician. It is very well printed, excellently illustrated, besides containing articles of the highest practical worth and scientific value. This publication is a step in the right direction, and it is destined to occupy a position such as that which has been occupied for years by the celebrated *Charité Annalen* of Berlin. Dr. Jonathan Wright is Editor, and Drs. Edgar S. Thompson and Arthur B. Duel act as Associate Editors. All the articles are contributed by members of the hospital staff and are reproduced from the journals in which they have originally appeared. This is certainly a most excellent idea, as it enables one interested in the subjects with which it deals to have all the papers in one volume instead of being scattered throughout a number of publications and thus obviates the inconvenience as well as the possible inability of obtaining them as promptly as could be desired. We cannot give the price at which this publication is issued, but have no doubt that it may be obtained from the editor by addressing him at 103 Park Avenue, New York.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the *JOURNAL*:

Manhattan Eye and Ear Reports. No. 3. March, 1904. 8vo. pp. 186. Illustrated. [Manhattan Eye and Ear Hospital. 1904.

The International Medical Annual. A Year Book of Treatment and Practitioner's Index. By Thirty-two Contributors. Twenty-second Year. 1904. 12mo. pp. 770. Illustrated. [New York: E. B. Treat & Company. 1904. Price, \$3.00.

Notes on the Chalybeate Springs of Spa (Belgium). A Medical Study with a Description of the Town and its Environments, and a Map. By R. Wybauw, M. D. Preceded by a Historical Introduction on the Influence of English Visitors Upon the Development of the Town of Spa. By Monsieur Albin Body. 12mo. pp. 79. [Spa: J. Engel-Krims. 1904.]

A Manual of Clinical Diagnosis. By Means of Microscopical and Chemical Methods. For Students, Hospital Physicians, and Practitioners. By Charles E. Simon, M.D. Fifth Edition, thoroughly Revised and Enlarged. 8vo. pp. 695. Illustrated with 150 Engravings and 22 Plates in Colors. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, \$4.00, net.]

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., assisted by H. R. M. Landis, M.D. March 1, 1904. 8vo. pp. 337. Illustrated. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, per annum, in four cloth-bound volumes, \$9.00; in paper binding, \$6.00, carriage paid to any address.]

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, other than Drug-giving, useful for the Prevention of Disease and in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A.M., M.D. Vol. VIII. Rest, Mental Therapeutics, Suggestion. By Francis X. Dercum, M.D., Ph.D. 8vo. pp. 332. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, by subscription only. Eleven volumes, cloth, \$27.50; half-morocco, \$38.50.]

Archives of Electrology and Radiology is the name which has been adopted by the *American Electro-Therapeutic and X-Ray Era*. It continues to be published in Chicago at the price of \$2.00 per annum, and is still the official organ of the Chicago Electro-Medical Society.

Notes on the Chalybeate Springs of Spa (Belgium) by R. Wybauw, M.D., is a 79-page illustrated pamphlet, duodecimo in size, with a map of Spa and its environments. It will prove a very convenient little guide to those who conclude to visit this watering place and these will find it more especially congenial, as it enjoys the presence of many English visitors.

MELANGE.

American Medical Editors' Association.—The annual meeting of this Association will be held in the parlors of the Hotel Dennis, Atlantic City, N. J., at 2 P. M., June 6th. A most interesting programme has been prepared and many instructive papers upon Medical Journalism and allied subjects will be presented. All editors are most cordially invited to attend.

The Tri-State Medical Society of Iowa, Illinois and Missouri will meet in St. Louis, June 15th, 16th and 17th. An interesting program is being prepared, and some of the most distinguished physicians and surgeons of the country will attend the meeting. The president is Dr. W. B. La Force, Ottumwa, Iowa; and Dr. Louis E. Schmidt, 1003 Schiller Building, Chicago, is the Secretary. Dr. James Moores Ball, 3509 Franklin Avenue, St. Louis, is Chairman of the Committee of Arrangements.—W. B. La Force, President.

Railroad Rates to Atlantic City.—The Central and Western Associations of Passenger Agents have made a rate to the meeting of the American Medical Association at Atlantic City, N. J., of a single fare plus \$1.00 for the round trip. The Baltimore & Ohio Southwestern is ready to carry this rate on all its lines east of the Mississippi River, and has established a rate of \$23.25 for the round trip from St. Louis. Tickets will be on sale June 1, 2, 3, 4 and 5, and are good to return until June 13. They are also good for stop-overs at Washington, D. C., Philadelphia, and Baltimore, within the final limit.

Atlantic City Hotels.—A List of the Hotels and Prices—Ample accommodation for All.—Atlantic City has about 1,200 hotels and boarding houses. Out of these the committee has selected the following houses, with their rates appended, which they can recommend. Comfortable board may be obtained in Atlantic City from \$1 per day upward. The minimum rates apply to single rooms without baths, while the per capita rate per day for double rooms in most cases can be slightly reduced when two occupy the same room. For those wishing accommodations on the European plan, the Dunlop and Young's

Hotel are exclusively European; the Grand Atlantic, the Wiltshire, the Garden, the Islesworth, and the Rudolf, furnish accommodations on either European or American plans. The prices given below cover the American plan, except those referring to the Dunlop and Young's Hotel.

HOTELS.	RATES PER DAY ON AMERICAN PLAN.	
Bouvier.....	\$1.50 and up.	
Roxborough	1.50	to \$2.50
Revere	2.00	to 2.50
Altamont Craig Hall	2.00	to 3.00
Archdale	2.00 and up.	
Belmont	2.00 and up.	
Berkshire Inn.....	2.00	to 3.00
Chester Inn.....	2.00	to 2.50
Dunlop, \$2.00 to \$3.00. European exclusively.		
Young's Hotel, \$2.00 to \$3.00. European exclusively.		
New Hygeia	2.00	to 3.00
Albermarle	2.00	to 3.50
Arlington	2.00	to 3.50
Holmhurst.....	2.00	to 4.00
Champlain	2.00	to 4.00
Kenilworth Inn	2.00	to 4.00
Hotel Majestic	2.00	to 4.00
Hotel Boscobel	2.00	to 6.00
Chatham	2.50	to 3.00
Glaslyn	2.50	to 3.00
Hotel New England	2.50	to 3.00
Ponce de Leon	2.50	
Wiltshire (also European)	2.50 and up.	
Hotel Imperial	2.50	to 3.50
Hotel Shoreham	2.50	to 3.50
Lorraine	2.50	to 3.50
Rittenhouse.....	2.50	to 4.00
Grand Atlantic (also European)	2.50	to 5.00
Raleigh	3.00	
Hotel Gladstone	3.00	to 5.00
Hotel Savoy	3.00	to 5.00
Hotel Strand	3.00	to 5.00
Haddon Hall	3.00	to 7.00
Islesworth (also European)	3.00	to 8.00
Shelburne	3.00	to 8.00
Seaside	3.50	to 4.00
Rudolf (also European)	3.50	to 5.00
Garden	3.50	to 6.00
Hotel Dennis	3.50	to 6.00
Royal Palace	3.50	to 6.50
Hotel Windsor.....	3.50	to 7.00
Hotel Chelsea	4.00 and up.	
St. Charles	4.00 and up.	
Hotel Traymore	4.00	to 8.00
Hotel Brighton	4.00	to 10.00
Marlborough House	4.00	to 10.00

In order to get good accommodations engagements for rooms should be made without delay. The committee will be glad to furnish any information desired, and will be pleased

to engage quarters at the various hotels, or physicians may write to the hotel direct. Wm. Edgar Darnall, Chairman Hotel Committee.—*Journal American Medical Association.*

Dislocation of the Carpal Scaphoid.—The patient of L. W. Ely was a man of twenty-five years, whose wrist was caught under an overturned automobile. The injury was at first considered as a crushing of the tendons and hot applications were prescribed. When seen twenty-four hours later by the writer the wrist was swollen and infiltrated, and presented on its flexor aspect a number of abrasions, showing the nature of the violence—that is, direct. Motion or pressure caused pain. The case appeared to be a Colle's fracture, and the patient was told that he must take an anesthetic and have it reduced. The operation was done that afternoon. Under ether, crepitus could be distinctly perceived in the wrist, though its origin could not be easily ascertained. By manipulation, the scaphoid could easily be dislocated on the dorsum of the wrist, and by pressure could be replaced. On this symptom the diagnosis was made. A skiagram taken at a later date showed a slight tipping forward of the scaphoid and a chipping off of the styloid process of the ulna; but there is doubt whether the lesion was a simple dislocation of the scaphoid, or whether it was accompanied by a fracture of this or of one of the neighboring bones. The skiagram showed no such fracture, but the crepitus seemed to come from a point very near the scaphoid. The dislocation, however, was unmistakable. The treatment was by anterior and posterior molded plaster-of-Paris splints, the posterior splint reaching to the end phalanges, the anterior to the metacarpophalangeal joints. At the end of one week the anterior splint was removed, and at the end of about three weeks the posterior splint was taken off, and adhesive tape was applied to the forearm and hand. This was left on for about two weeks, permitting some motion, but affording a certain amount of support. The patient recovered with a good degree of motion in all directions.—*Medical Record.*

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ORIGINAL COMMUNICATIONS.

FIFTEEN CASES OF EXTRA-GENITAL CHANCRE OBSERVED IN 1900, 1901, AND 1902.*

BY A. H. OHMANN-DUMESNIL, ST. LOUIS.

The subject of extra-genital chancre is one which always possesses a certain amount of interest for him who has occasion either to treat and observe cases of lues, or who reads the literature of the subject. It is not so many years ago that a case of extra-genital chancre was recorded as something almost extraordinary. To-day there is hardly a medical student who has not seen several demonstrated by his professor. And yet, when we take the rank and file of medical practitioners who have served their time as hospital internes under competent teachers, we find the majority in such a mental condition that they hesitate to formulate a diagnosis when the case presents itself in their private practice. This is very easily understood when we take into consideration that they now assume a responsibility all their own, and a misstep is apt to result in the loss of a practice which is just budding. We also have the family physician who suspects the true nature of the lesion, when an extra-genital chancre is presented, and yet hesitates to pronounce himself on account of the social standing of his patient, not deeming such a thing possible, and also from the fear that he might possibly be wrong and the statement of his diagnosis would result in his losing a very worthy and profitable family. Besides, the responsible members of such family might doubt him and even suspect his motives in telling what is really the truth.

*Read before the Missouri State Medical Association, May 17., 1904.

It is not the intention here to make a thorough review of the subject. The most complete and elaborate review of the subject so far published is beyond all doubt that which is contained in the classic work of L. D. Bulkley, "Syphilis Insonitum." Of course, this does not include the extra-genital chancres acquired in other but innocent ways. These latter are numerous enough, but for elaborate tables of such we must turn to French and German authors who seem to have greater facilities for their observation. It must not be forgotten that genital chancres are vastly more numerous than the extra-genital variety, which latter is frequently never seen by practitioners who observe many cases of the genital sort. To him who is a close observer and has opportunities of seeing many cases of syphilis, cases of extra-genital chancre come before him frequently enough. As the writer stated in a former paper: "A question of more than ordinary interest which arises in each one of these cases is, how did the infection occur? This at best is most difficult to answer, and many of the methods which have been published did more credit to the imaginations of the writers than as satisfactory reasons to their readers. At best these can only be surmises and inferences more ingenious than satisfactory; and it is only in a small proportion of cases that absolute certainty may be asserted in a given one. This inability to trace the source of the origin of the infection, however, detracts in no wise from the interest attaching to the peculiar site affected or the character of the lesion presented. In fact, it is the sum of these peculiarities which renders interesting a subject which, under other circumstances, might be considered commonplace."

With these few introductory remarks will be given the clinical records of fifteen cases seen in the three years succeeding the one in which twenty-five were seen. It may not be inappropriate to premise the matter by stating that the fifteen cases which will be outlined were all seen in private practice and no hospital cases are included in this record as were in the previous one. This is done for the purpose of giving a more adequate idea of what a physician is to expect in his practice.

1. Twenty-five cases of Extra-genital Chancre observed in 1897. 1898 and 1899. *St. Louis Medical and Surgical Journal*, Dec., 1900.

CASE 1.—A young man, aged 24, a mechanic by occupation, presented himself for treatment. He was dark haired, of rather spare build, but strong and with comparatively well developed muscles. Upon interrogation he stated that he had not recently had headache or suffered from any other subjective symptoms. He stated that his last intercourse had been on the 5th of the month and that he saw a chancre for the first time on the 26th. Upon examining him I found two chancres. Upon palpation there was no pain in either. One chancre was located on the left side of the prepuce, in the balano-preputial sulcus. It was markedly indurated, this latter being of the variety known as cartilaginous. The other chancre was situated on the left side of the lower lip. It was the size of a silver ten-cent piece and pressure did not elicit pain. When, however, tobacco came in contact with it, it produced the sensation of burning. This case was interesting not only on account of the extra-genital chancre, but also because it presented a typical example of what I denominated some years ago, chancre *a distance*. This variety I had occasion to elaborate upon some years ago.² No exact details were obtainable in this case beyond the fact that the patient was most probably infected by a prostitute who had mucous patches of the vagina and of the mouth.

CASE 2.—A young man, aged 24, occupation waiter, consulted me for a chancre on his prepuce, and in the course of the examination I found another chancre upon his right forefinger. He could give no details either in regard to the time of the incubation of the lesions or as to the probable manner in which the finger had been infected. He stated that he continually pressed the chancre with his right finger tip and then claimed that both the digital and preputial chancres appeared simultaneously. So that the entire history can be looked upon as incomplete and unsatisfactory. The chancres both had the cartilaginous induration and rapidly yielded to local treatment of bichloride solution applications.

CASE 3. This case was also one of double chancre in a young man, single, who was 30 years of age, and whose occupation was that of bricklayer. He confessed to me that he was

2. Double chancre *a distance*. St. Louis *Medical and Surgical Journal*, July, 1892.

of a very passionate nature, and when I first saw him he had a chancre on the upper part of the prepuce and one on the upper portion of his left upper lip. Here the chancre was large and encroached quite markedly upon the vermillion of the lip. The induration in both chancres was marked and of the cartilaginous form. As in Case 2, the submaxillary and inguinal adenitis was well marked. In fact, there could exist no doubt as to the nature of the lesions. The history was also very unsatisfactory in this case, and confrontation was impossible.

CASE 4.—A young married woman of 24, whose husband I was treating for syphilis, was brought to me by him. She presented a chancre of the size of a five-cent nickel piece on the mucous membrane of the lower right lip. In this case there was a more satisfactory history than in many of the others, although it was deficient in the fact that no exact dates could be given. The man, who had mucous patches of the tongue, lips and mouth, stated that he had frequently kissed his wife and that there is no doubt that this was the cause of her infection; for his penis was free of any lesions and she presented none of her genitalia. She subsequently developed a secondary eruption in the form of a roseola, shortly followed by a small, papular syphilide which rapidly gave way under the influence of protiodide of mercury.

CASE 5.—A young unmarried woman of 25, without any occupation, came to see me on account of an intractable sore throat which no one seemed to be able to treat satisfactorily. I found, upon interrogation, that she was the mistress of a man who I knew had contracted syphilis. The patient did not present any marked eruption, but complained of painful enlarged lymphatic ganglia on the right side of the neck which interfered very much with deglutition even of liquids. Upon examining her throat, I found a chancre upon the right side of the pharynx directly posterior to the pillar of the fauces. The chancre was about an inch long and a little less than half an inch wide. It was not sensitive to a direct touch, but such action awakened a reflex cough. The mucosa was markedly congested and the induration was very perceptible. The edges of the chancre were sharp cut and distinct and projected above the level of the mucous membrane. Under internal and local mercurial treat-

ment rapid amelioration set in, and treatment was soon discontinued by the patient. There could no explanation be elicited from the patient in regard to the manner in which the infection occurred, and it will probably always remain unexplained.

CASE 6.—This case was a male infant of nine months, whose mother was referred to me by a physician. The mother could only make the one statement that she had observed a "sore" upon the child's buttock and had tried some home remedies upon it without success. The same results obtained with all the methods suggested by women friends and neighbors. She then determined to consult a physician and he, not recognizing the nature of the lesion, had the same want of success in his treatment. It was then that he referred the case to me. When presented there existed upon the right buttock a crustaceous lesion, circular in shape, about one and a half inches in diameter. There was marked induration about its periphery and at the base. It was not painful and its general appearance suggested a chancre. The child was pale and anemic and a general condition of malnutrition was present. A slight maculo-papular eruption could be seen upon the abdomen and chest. Under these circumstances the diagnosis of chancre was made and mercurial inunctions ordered. The child immediately began to improve; it took kindly to the bottle and in a few months it presented the picture of health. The mother never could explain the manner in which the infection could have occurred despite all the suggestions that were made. She herself was not syphilitic, nor was her husband, and the arm or cheek of a syphilitic bearing a lesion and coming in contact with the child's buttock was the only plausible explanation that suggested itself.

CASE 7.—The patient was a young man, about 24 years of age, who was inclined to run after women. When referred to me by a physician, he presented a well marked chancre of the upper lip on the left side. He did not suspect the nature of his trouble until he was told what it was. No knowledge of the woman from whom it might have been contracted could be elicited from him. In fact, he claimed complete ignorance and he had no reason for this, for he placed himself under treatment directly he was informed of the nature of his trouble.

He had marked induration of the lymphatic glands of the left side of his throat and neck, and in a very short time he showed a small papular syphilide. He acknowledged to kissing, but denied having been bitten, and no other possible cause but the former could be invoked. As in the case of a large number of extra-genital chancres, it was not possible to assign any definite cause for the infection beyond a reasonable surmise, which, in all probability was the true explanation of the manner in which the infective inoculation had taken place.

CASE 8.—This was a case which was most interesting. The patient, a single man of 45 years, pleaded guilty of having taken into his mouth the tongue of a woman with whom he had sexual intercourse. At the time he presented himself he had a large, markedly indurated chancre under the under surface of the tongue on the right side. The lymphatic glands of that side were markedly enlarged and indurated. So great was this enlargement that the deglutition of solid food was an impossibility. At this time pressure upon the glands to the tongue elicited no pain. The patient was very actively treated with mercurials locally and internally, and for a certain length of time there was apparent improvement. After this pain of a very marked character was felt, the tongue enlarged very much and speech was an impossibility. A thorough examination revealed the fact that carcinoma had declared itself, and it ravaged the tissues in a very destructive manner. The malignant process was the precursor of the patient's death. I will not discuss the engrafting of a carcinomatous process upon syphilitic tissues in this place, but reserve it for some future paper.

CASE 9.—This case was that of a physician, 46 years of age, married, who had a lesion on the right forefinger which he had mistaken for an X-ray burn. He found it to be very intractable to treatment, and at first attributed this to the supposed nature of the lesion. As is well known, burns produced by the Roentgen ray are stubborn to the generally accepted modes of treatment for burns. The lesion which had caused him so much trouble was a rather large fungating chancre. The induration was well marked and some pain upon pressure existed. This latter was no doubt due to the treatment which had been used, including as it did, poulticing and strong anti-

septics, not mercurial in nature. When the diagnosis was announced the patient refused to accept it, as he could not recall a circumstance connected with a possible infection. And yet there was marked induration of the lymphatic ganglia of the arm and axilla. The patient felt convinced finally when a maculo-pustular syphilide made its appearance upon his chest and shortly afterwards involved his arms, back and thighs. Energetic treatment prevented the appearance of any more syphilides.

CASE 10.—This case was that of another physician, single, and 34 years old. He is enthusiastic in the practice of gynecology and has always argued in favor of digital examination in the diagnosis of the diseased uterus as against the use of the vaginal speculum. He presented himself with a well marked chancre of the right forefinger. He immediately referred this accident to a certain one of his patients whom he had examined by the digital method, and subsequently found to be syphilitic. The chancre in his case was a dry crustaceous lesion, without pain, but persistent. The lymphatic glands of the arm and of the axilla presented a classic induration, and the patient immediately recognized the exactness of the diagnosis. A very slight eruption appeared shortly afterward and promptly yielded to treatment.

CASE 11.—This case was that of a young unmarried man of 22. He was referred to me by a physician who had made a correct diagnosis. Previously to that the patient had been treated for epithelioma, the primary lesion having been mistaken for a malignant one. When seen by the writer he had a typical chancre of the upper lip on the left side. He very frankly acknowledged that he thought he had been infected by a kiss. The accompanying adenitis was marked and easily defined. At the time of examination there existed confirmatory signs in the shape of mucous patches of the buccal cavity and a slight papular syphilide of the chest. The patient readily yielded to treatment, and there was a rapid disappearance of all objective signs.

CASE 12.—This case is one in which the patient could give a pretty fair history. He was a young German, not very long in this country, and without money or occupation. Being unmarried and about 23 years of age, he fell an easy victim to the wiles

of a prostitute. He was not content with sexual intercourse, but sought to satisfy his libidinous desires still further by inserting his finger in her vagina. When examined he presented a chancre of the glans, located on the left side, and in addition a primary lesion on the right index finger on the radial side and implicating the distal phalanx. The induration was marked and there was a fungating tendency about the lesion.

CASE 13.—This was a Russian of 33, a teamster by occupation. His parents were Russians and he gave a good family history. Upon being interrogated, he stated that he had the habit of introducing his finger into the vagina of a woman with whom he had frequent intercourse. The sore of which he complained first appeared at the distal joint of his right forefinger. The patient described it as a white spot which felt like a bullet set in the skin. It broke out at the second joint on the palmar surface of the finger and spread over the whole finger. There was no very marked induration of the chancre, it being of the parchment variety in the distal phalanx. That on the palmar surface had a cartilaginous induration, and the case was really one of double chancre of the finger. So far as involvement of the lymphatic glands was concerned, there was a marked induration of the right epitrochlear gland, but none of the other lymphatic ganglia. This case is sufficiently interesting to receive independent treatment in a paper especially devoted to it.

CASE 14.—This was an unmarried female. 18 years old, who is stout and physically strong. She lived at home with her parents. Her father evidently acquired syphilis, as her brother, several years her junior, had prenatal syphilis. The patient under consideration as well as two older sisters, were born before the father had syphilis. They are both healthy and non-luetic. The patient under consideration, when seen, complained of headache and sore throat, as well as of an eruption. On examination there was found a chancre in the centre of the upper lip, accompanied by double submaxillary adenitis. A papulo-pustular eruption existed on the face, as well as on the body, arms and thighs. The other lymphatic glands which were indurated, in addition to those mentioned, were the cervical, pre-auriculars and both epitrochlear. Efforts to arrive at a clear history of the manner of infection only resulted in an in-

ferential conclusion. By dint of questioning the avowal was made that she had been kissed on several occasions by a young man who, from the description furnished, was syphilitic.

CASE 15.—This patient was a single young man of 24, a Jew, who presented himself with a chancre of the upper lip, very near the centre. The induration in the lesion was a marked one, although not to the extent of being cartilaginous. He stated that the woman from whom he had most probably derived the infection had been repeatedly kissed by him and complained of having a sore mouth. This would certainly be sufficient to establish the origin of the chancre. The submaxillary glands were indurated and the pre-auricular on one side. In addition to this, there existed a rather discrete small papular syphilide on the chest. The remainder of the integument was clear of any eruption. Some headache and a few slight pains in the joints existed.

ANALYSIS.

If we take all the cases which have been reported they can be easily tabulated as follows:

Chancre of lip alone.....	8
Chancre of lip and glans.....	2
Chancre of finger.....	1
Chancre of buttock.....	1
Chancre of pharynx.....	1

13

From this we find that the location of the majority of these extra-genital chancres was the lip. Another interesting circumstance in connection with this is that it was the upper lip that was involved. In fact, it seems to be the universal experience of all syphilographers to observe the large majority of extra-genital chancres on the lip. In the present small series it was always the upper lip that was the seat of the chancre.

Next in order of frequency was the finger. Here, in the present list of cases, it was the right index that was involved, and in all of the cases there was not a simple, single chancre. An interesting case is that in which two chancres were found involving the finger.

In two instances unusual locations were each one the site of the primary lesion. One was the pharynx, which is compara-

tively unusual, but not rare. The other was that in which the buttock was the portion on which a chancre was observed. This is certainly a very unusual location, and there are but very few cases on record. Those who have devoted much time to the collection of histories of extra-genital chancres in many instances do not mention this location.

A circumstance which should be noted is that in every instance there existed corroborative signs, making the diagnosis a certain one. So many errors are liable to be made in the diagnosis of the chancre that all such evidence must be sought in order to make an expression of opinion certain and beyond all doubt. This was done in all of the cases detailed above, and cases of chancre redux were very carefully eliminated.

One very interesting point in connection with these cases is that there were found five cases of double chancre *a distance*. This is a rather uncommon condition and the finding of this variety in one-third of the total number of cases of extra-genital chancres observed is, to say the least, rather surprising. In fact, it would lead to the thought that this is a comparatively frequent occurrence. And, yet, syphilographers either omit all mention of this form, merely mention it, or have but one or two cases to briefly report. Another very unusual case given above is that of two concurrent chancres of a finger, one on the dorsal and the other on the palmar side. This form of infection has not been spoken of by writers on syphilis, to any noticeable degree.

To refer to the deontology of the cases reported, it was found that five cases were examples of syphilis insontium, or syphilis of the innocent. Two chancres of the lip were acquired innocently and were in females. Two of the finger occurred on the forefinger in physicians who were accidentally inoculated by patients. One of the buttock was in an infant who was inoculated in an unknown manner. The other ten cases were infected through sexual intercourse and were simply unexpected reminders of libidinous passion on the part of their carriers. So that we are led to the conclusion that only one-third of the cases were innocent and the remaining two-thirds were due to depravity. In a former series of twenty-five cases which I reported³ there were 48 per cent. (12 cases), a smaller percentage than in the present.

3. *Loc. cit.*

The reporting of these cases has not been made with the intention of adding to the long list of medical curiosities, but rather to call attention to the fact that chancres not only exist in unexpected localities, but that when a case of recently developed syphilis is seen diligent search should be made for the chancre and it should be found. If the writer has succeed in doing this, a part of his object has been attained.

SYMPOSIUM OF SYPHILIS.

THE CUTANEOUS MANIFESTATIONS OF SYPHILIS.*

BY JAY F. SCHAMBERG, M.D., PHILADELPHIA, PA.

Dr. Schamberg illustrated his remarks with lantern slides exhibiting the various forms of syphilides and other eruptions apt to be confounded with them.

The cutaneous manifestations of syphilis possess certain characteristics which make them readily recognizable in the vast majority of cases. In exceptional instances the nature of the disease may be obscured as a result of deviation from the normal types. Error may occur, too, from the protean character of syphilis and its ability to closely simulate non-specific eruptions. Indeed, so far as cutaneous medicine is concerned, syphilis is the greatest of all imitators. At times this disease may produce eruptions so strongly resembling psoriasis, lupus, epithelioma, eczema, smallpox, etc., that experienced observers may be deceived. Under ordinary circumstances, however, the features of syphilitic dermatoses are clear enough to permit of a positive and unequivocal diagnosis.

As a general rule it may be stated that syphilides do not give rise to *itching*. This assertion will hold good for the vast majority of cases, but it is subject to occasional exceptions. During the rapid evolution of early syphilides some irritation of the skin may be present, but it is slight and usually of short duration. I have, however, occasionally noted severe itching in miliary papular and pustular eruptions which were scaling considerably. The absence of itching is one point in favor of a skin lesion being luetic.

*Read before the Philadelphia County Medical Society, March 9, 1904.

The *color* of syphilitic lesions often aids in the diagnosis. It must be remembered that the characteristic tint is often not observed in the very beginning. Indeed, the early macular and papular eruptions upon their first appearance are often pinkish-red or bright red; soon, however the vivid redness fades and a dull-red color takes its place. Later on, a brownish-red tone is acquired; in some cases the lesions may be raw-ham or copper colored. As the eruption fades out a well-pronounced brownish pigmentation remains. In general terms it may be said that the color of syphilitic eruptions is decidedly less vivid than that of simple dermatoses of the same type.

A common feature of syphilis is the presence upon the skin of a variety of lesions in different stages of development. This *polymorphism* is a feature of considerable diagnostic import. It is due to the slow appearance of the eruption, the different ages of the lesions and the tendency of some to relapse. For instance, papules, pustules, squamous patches and moist papules may be present at the same time.

Some syphilitic eruptions tend to assume a *circular form*. this is particularly true of the small papular lesions and of the recurrent erythematous rashes. The annulopapular syphilide is much more common in negroes than in whites.

The early eruptions, the so-called secondaries, are usually macular, papular or pustular. (The vesicular syphilide is extremely rare.) They are bilateral, generalized over the body, superficial and do not, as rule, tend to deep destruction. The late or so-called tertiary eruptions are the tubercular, ulcerative or gummatous varieties. They are usually asymmetrical, circumscribed and deep seated with a tendency to deep destruction of the soft tissues. A peculiarity of the tubercular or nodular eruptions is the frequent tendency to form circular, segmented or horseshoe-shaped patches. This configuration often lends material aid in the diagnosis.

Tertiary patches may occur anywhere, but are most commonly seen about the face, on the palms and soles and occasionally about the elbows and knees. They pursue an indolent course; often, however, they ulcerate and show but little tendency to spontaneous disappearance.

In the diagnosis of an early syphilitic eruption one may be assisted by attention to the history and the associated mani-

festations, such as the presence or remains of the initial lesion, generalized glandular enlargement, tonsillar ulceration, mucous patches in the mouth, alopecia, iritis, pains in the muscles, joints or bones, anemia, etc.

In the diagnosis of tertiary lesions one may be aided, apart from the eruption itself by the history, scars of previous cutaneous outbreaks and evidence of former destructive involvement of the soft palate.

The influence of mercury and the iodids upon the existing lesions is a valuable test in doubtful cases. It must be remembered, however, in the application of the therapeutic test, that these remedies are often of considerable value in certain other dermatoses. Mercury acts most favorably in some cases of lichen planus and the iodids give gratifying results in yeast infection of the skin (blastomycosis), actinomycosis and in some cases of psoriasis.

In the diagnosis of cutaneous syphilis too much stress must not be attached to the presence or the absence of any one feature; the composite symptomatology must be studied and conclusions carefully drawn.

VISCERAL SYPHILIS.*

BY JOHN M. SWAN, M.D., PHILADELPHIA, PA.

In 1894 Musser¹ read a paper before the Association of American Physicians in which he considered the progressive diminution in the number of cases of syphilis and the mild character of the disease. He concluded that tertiary manifestations are not common and that visceral syphilis is rare. He based these conclusions on the statistics of the Philadelphia Hospital and the Presbyterian Hospital. In the latter institution, out of nine thousand cases there are records of two cases of hepatic syphilis and four of laryngopharyngeal syphilis only. I do not include the brain and cord lesions, which will be considered later by Dr. Burr. This rarity of visceral syphilis at the present time would seem to be confirmed by the evidence obtained by consulting the records of the Pathological Society of Philadelphia.² Since its foundation in 1857, speci-

*Read before the Philadelphia County Medical Society, March 9, 1904.

mens from only seven cases of visceral syphilis have been shown at its meetings; five cases of syphilis of the liver, one case of syphilis of the kidneys and one case of the pancreas. It is apparent, therefore, that one physician will see very few cases of visceral syphilis, even when he has the complete clinical facilities at his command which are offered by our hospitals.

THE LUNGS.—Syphilis of the lung is probably not so rare a condition as might be supposed. According to Aufrect,³ pulmonary syphilis may be due to the formation of gummata or to true inflammatory conditions affecting the connective tissue or the parenchyma. The literature of the subject is thoroughly reviewed by the author just mentioned and by Stengel.⁴ The studies of the many observers quoted by these writers seem to prove that diffuse pneumonic disease due to syphilis does exist. Whether or not there is a syphilitic disease of the lung that closely resembles tuberculosis in its clinical manifestations there is some difference of opinion. Osler⁵ says that if this disease exist, he has no personal knowledge of it. Stengel's review of pulmonary syphilis, however, was prompted by the observation of a case in his wards at the Philadelphia Hospital in which the course of the disease very closely resembled that of pulmonary tuberculosis; and Berg¹⁸ is of the opinion that a syphilitic lesion of the bronchi or the blood vessels may be the exciting cause of pulmonary tuberculosis. He also believes that pulmonary syphilis complicated by tuberculosis is a more frequent condition than is generally believed. Furthermore, Winfield²¹ reported a case of pulmonary syphilis in 1902 that had been diagnosed pulmonary tuberculosis and treated as such by a number of New York physicians. In considering the possibility of such a condition the diagnostician must always bear in mind that a tuberculous patient may become infected with syphilis and that a syphilitic subject may develop tuberculosis, whether or not one disease predisposes to the other. Carlier⁶ unhesitatingly says, after a study of seventy-five cases of syphilis of the lung, that the gummatous form of pulmonary syphilis sometimes affects a dangerous resemblance to tuberculosis so that the microscope cannot make a differential diagnosis. The latter portion of this statement may be challenged.

The clinical manifestations of syphilis of the lung are, ac-

according to all observers, as a rule, apparent in the right lung and in the middle lobe of that organ. The physical signs are those of a lobar pneumonia or a chronic, fibrous hyperplastic consolidation. They consist of dullness, bronchial breathing, crepitant râles and subcrepitant râles in the interscapular region as far as the base of the right scapula and anteriorly in the second and third right interspaces near the sternum. When, however, the process is one of slow growth of connective tissue of the lung, these signs will not be present over the entire area until late in the course of the disease; so that dullness posteriorly may be accompanied by tympany anteriorly and the breath sounds may be weakened or absent over some part of the affected area.

The symptoms are those of chronic pulmonary disease in general. Cough is usually present, though of variable intensity. Dyspnea is frequently the most marked feature, as in a case of Aufrecht's. There is usually some expectoration, though it may be scanty, microscopic examination of which gives no positive evidence. Cases have been reported in which the sputum contained elastic fibers. Hemorrhage is rare and emaciation is not marked. The writers on this subject differ in their records of the temperature. Stengel published the chart of a patient in the Philadelphia Hospital which shows a febrile reaction with a maximum at noon or early in the afternoon. Probably there is always a more or less well-marked rise of temperature at some stage of the disease.

While the middle lobe of the right lung is the one usually affected by syphilitic disease, areas of consolidation may be found elsewhere. How shall we make a diagnosis in the case of a syphilitic individual who presents the symptoms and signs of pulmonary disease at an apex? Probably the persistent absence of tubercle bacilli from the sputum is the most dependable feature. This fact, in addition to unmistakable evidences of syphilis in organs, such as the liver, the bones or the eye, for which the syphilitic virus has a notable predilection, and an atypical symptomatology will point strongly to syphilis as the cause of the lung disease. It will also indicate antisymphilitic treatment. If, in a suspected case of pulmonary syphilis, mercurial or mixed treatment aggravate the symptoms, the treatment should be immediately discontinued.

THE STOMACH.—Syphilis may produce hemorrhagic erosions, ulcers and tumors in the stomach; it may result in stenosis of the pylorus; it may give rise to a symptom-complex exactly similar to gastralgia (Stockton¹²) and, according to Fenwick,⁹ it may set up chronic inflammation of the mucous membrane of the stomach.

Clinically, we may assume that syphilitic disease of the stomach commonly results in a train of symptoms that may be mistaken for gastric carcinoma, gastric ulcer or chronic gastritis.

Syphilitic tumor of the stomach is the result of the development of a gumma in the organ. Einhorn,⁷ reported two such cases in 1900 and a third in 1902. The last patient presented signs very suggestive of gastric carcinoma, but the symptoms were relieved and the tumor entirely disappeared on antisymphilitic treatment. In two of Einhorn's cases symptoms of stenosis of the pylorus were encountered which were relieved by the institution of mercurial treatment.

Syphilitic ulcer of the stomach is probably usually the result of the breaking down of a small gumma. The symptoms are those of a simple peptic ulcer. Indeed, a patient whose case was reported by Dieulafoy¹¹ in 1898 had resisted the routine treatment for simple peptic ulcer so long that he was about to be operated on, when the discovery of some old syphilitic cicatrices on his legs determined a trial of mercurial therapy. The institution of subcutaneous injections of mercury biniodid accompanied by potassium iodid was followed by cure. According to Fenwick, who has studied these cases clinically, pain is invariably present, usually in the epigastrium, and appears about one-half hour after taking food. When the disease is advanced, the pain is often most intense during the night and has been mistaken for the pain of a gastric crisis of locomotor ataxia. Vomiting is a conspicuous feature; at first the patient vomits only after his painful attacks, but later, as the accompanying gastritis extends, he may vomit after every meal. Hemorrhage is rare, although in the case reported by Dieulafoy and already referred to, hematemesis was a conspicuous symptom, and in another case of syphilitic gastritis reported by him in 1902 profuse hemorrhages from the stomach were noted. In the early stages of the disease free hydrochloric

acid may usually be found after a test meal, and in those cases in which nocturnal attacks of pain are present the vomitus contains an excess of hydrochloric acid. When the disease is advanced, there is usually evidence of lactic acid fermentation. Perforation may occur, as in a case reported by Flexner¹⁰ and one by Caesaris-Demel.⁸ Other cases of syphilis of the stomach simulating gastric ulcer have been reported by Einhorn. Flexner, in addition to his own case, collected thirteen cases of gastric syphilis from the literature confirmed by necropsy and histologic studies, and one case of probable gastric syphilis not absolutely proved.

Syphilitic gastritis has been studied by Fenwick, who reaches the conclusion that there can be no doubt that there is such a disorder. The disease presents the ordinary phenomena of chronic gastritis from other causes, but presents the distinguishing feature of intractability to ordinary treatment.

A negro male, aged thirty-nine years, presented himself at the Polyclinic Hospital, October 19, 1903, in the service of Dr. Daland. He complained of pain in the pit of his stomach. He was suffering from an iritis for which he was being treated in Dr. Hansell's clinic. He gave a history of a venereal sore when he was twenty years of age; he was married at the age of twenty-four, and his wife, who had never been delivered of a living child, had had eight or ten miscarriages, usually at about the third month. The pain in the stomach of which this patient complained began about a week before he was first seen. It was of the nature of a dull, almost constant ache. He was nauseated, but did not vomit. He presented bilateral, painless enlargement of the superficial lymph nodes and signs of consolidation at the right apex. A physical examination of his epigastrium was without result.

At that time I believed that the gastric symptoms and the physical signs in the right lung were due to syphilitic disease of those organs. As the patient had no expectoration, it was impossible to exclude tuberculosis of the lungs. The gastric symptoms, however, rapidly lessened and finally disappeared under mercurial treatment. It seems to me that if this were a case of gastritis in a syphilitic, the mercury would have aggravated the gastric symptoms rather than have relieved them.

In 1901 I saw a child, aged eleven months, the offspring of

a syphilitic father. The child was born at term, but had always been sickly. At the age of three months he had an attack which was diagnosed congestion of the lungs, and during his fifth and sixth months he suffered from an attack of infantile scurvy. For a week before I first saw him he had been vomiting, had abdominal pain and was constipated; but this last symptom was soon replaced by diarrhea; there was some fever. The attack resisted the usual measures adopted in treating gastrointestinal conditions in improperly fed children until he was put on mercurial treatment, when he improved rapidly. The child had a second attack, similar to the first, about one year later, when mercurials were again followed by relief of the symptoms.

Since my experience with this child, I have seen two cases in the dispensary of the Presbyterian Hospital in which mercurial treatment was followed by marked improvement in the marasmic children of syphilitic parents.

In the diagnosis of syphilitic disease of the stomach we must remember that there is no reason why a syphilitic subject should not have a carcinoma of his stomach, should not have a simple peptic ulcer, or that he should not contract a gastritis from some cause independent of his syphilitic disease. In fact, there are in many cases good reasons why a syphilitic should contract gastric inflammatory conditions. After due consideration has been given to the etiologic factors other than the specific disease, gastric syphilis may be diagnosed (1) after demonstrating the existence of a previous syphilitic infection; (2) when there is evidence of tertiary lesions in other organs; (3) by the resistance of the symptoms to ordinary treatment, and (4) by improvement and cure following antisyphilitic treatment.

Dieulafoy says that no one symptom points conclusively to gastric syphilis, but that the symptoms of gastric ulcer in a syphilitic should lead to the supposition that the gastric disease is due to the constitutional disturbance. He also says that one should never forget to search for syphilis in the previous history of a patient presenting the symptoms of simple peptic ulcer.

THE KIDNEYS.—Syphilis sometimes results in the development of gummata in the kidneys during the tertiary stage of

the disease. During the secondary stage of the disease cases are occasionally noted in which a true inflammation develops. This inflammation, according to Karvonen,¹⁹ may be (1) an acute syphilitic nephritis; (2) a chronic diffuse nephritis, or (3) a chronic indurative and cicatricial nephritis. These nephritides are marked by the usual signs of renal inflammation; the appearance of albuminuria with hyaline, epithelial and blood casts, fever, edema, anemia, etc.

In a given case of nephritis supposed to be due to syphilis, before a positive diagnosis can be made, the physician should know that the patient was not a subject of renal disease before he acquired his syphilitic infection. The diagnostician ought to be able to show that none of the ordinary etiologic factors of nephritis, such as alcohol, is active in the case under consideration; a requirement that presents great difficulty. The symptoms of renal disease should disappear promptly upon the institution of antisyphilitic treatment. Chauffard and Gouraud¹³ hold the view that cases of syphilitic nephritis are characterized by an exceptionally high degree of albuminuria, in their patient fifty-five grams to the liter. Other cases of syphilitic nephritis have also shown a high percentage of albumin: a case reported by Hoffman and Salkowski¹⁴ showed seven per cent. of albumin; one reported by Ferras¹⁵ gave 2.66 per cent. (40 grams in 1500 cc. urine); one reported by Waldvogel²⁰ gave 9 grams to the liter, 13.5 grams to 1500 cc. and 7.5 grams to 2500 cc. on three different occasions; one reported by Stepler¹⁷ gave 1.2 per cent. of albumin.

In the diagnosis of nephritis due to syphilis, account must be taken of cases in which skin eruptions have been erroneously diagnosed and the energetic administration of mercurials has set up a renal inflammation, as in a case recently studied by the writer.¹⁶ In such cases mercury can be demonstrated in the urine.

THE LIVER.—The liver is probably more frequently the seat of syphilitic lesions than any of the other organs; at least, syphilis of the liver is more frequently diagnosed than syphilis of the other viscera.

From the pathologic viewpoint, the disease may be diffuse (syphilitic cirrhosis) or circumscribed (gumma of the liver).

Clinically, syphilis manifests itself by the production of

icterus in the early secondary stage and by the production of cirrhosis and of gummata in the tertiary stage.

The symptoms of syphilitic icterus differ from those of simple catarrhal jaundice by the absence of the accompanying gastrointestinal symptoms, although the stools are, as a rule, clay colored. The usual etiologic factors, such as dietetic errors and exposure to cold, are also absent. The icterus is said by Lancereaux to be due to the pressure of the enlarged lymph nodes at the transverse fissure of the liver on the bile ducts. This view is accepted by Quincke and Hoppe-Seyler.²³ The diagnosis is made by the simultaneous occurrence of the secondary lesions of syphilis, the absence of gastrointestinal symptoms and the influence of antisyphilitic treatment.

The symptoms of syphilitic cirrhosis of the liver differ somewhat from those of alcoholic cirrhosis. According to Marcuse,²² pain in the hepatic region is the most constant symptom, the liver is usually enlarged, ascites and general anasarca appear, but icterus from compression of the bile ducts is rare. The beginning of the disease is attended by gastrointestinal disturbances in two-thirds of the cases.

The enlargement of the liver in syphilitic cirrhosis seems to be one of the principal diagnostic points, and Osler lays great stress on the extreme irregularity of the organ, as revealed by palpation. A history of syphilitic infection and the existence of syphilitic lesions in other organs will aid the diagnosis.

Gumma of the liver may exist without producing symptoms, but occasionally a superficial gumma may be mistaken for carcinoma of the liver, or a deep gumma may, by its growth, so isolate a portion of the liver substance that a resemblance to malignant disease is produced. Marcuse and Quincke and Hoppe-Seyler claim that the co-existence of splenic enlargement and albuminuria point to gumma; the first writer maintaining that these signs are never found in cases of carcinoma. The patient with syphilitic disease of the liver often has periods of retrogression of symptoms during which he feels comparatively well; but soon the symptoms reappear in force. Such a history is very suggestive of syphilis of the liver. In this as in the other conditions already referred to, the history of infection with syphilis and the existence of syphilitic lesions in other organs aid in the diagnosis.

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SYPHILIS OF THE NERVOUS SYSTEM.*

BY CHARLES W. BURR, M.D., PHILADELPHIA, PA.

It is impossible in a twenty-minute paper to attempt any thorough study of nervous syphilis. All that can be done is to consider a few points in diagnosis and make some remarks on treatment.

There is no symptom or group of symptoms pathognomonic of syphilitic infection of the nervous system. There are groups of symptoms which occur so frequently and are so rarely due to other causes that their presence creates strong presumptive evidence; but the diagnosis can rarely be made with surety of correctness in the absence of other evidence or of the therapeutic test or unless the case be watched for quite a long period. A diagnosis made at the first visit, and based on the symptoms then present alone without a knowledge of the past medical history of the patient and the previous course of the disease, indicates, as a rule, careless thinking rather than skill.

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It is often forgotten that syphilis does not protect against other diseases and that because a man has had a chancre it does not necessarily follow that his present trouble is syphilitic.

It is not so much the symptoms themselves that are of value in diagnosis as the way they are grouped together and their course; the way they successively appear. One great characteristic is multiplicity, that is, the appearance of symptoms, it may be almost simultaneously or in rapid or slow succession, which need for their production widely scattered lesions. The morbid anatomy of the disease explains this. It never attacks exclusively one small area of the brain or cord, is never strictly local, but always more or less generalized. Its first gross lesions are always in the bloodvessel walls or in the membranes of the cord and brain. It never attacks one arterial branch to the exclusion of all others, but many at the same time. The disease may progress so rapidly in one spot as to produce such marked local symptoms that others may be overlooked, but if sought for they will be found. This is true even at an apparently early period of the disease, apparently early only, because symptoms have already appeared of which the patient can have no personal knowledge. For example, it is not infrequent after some sudden and striking brain lesion to find on examination aberrant pupillary reactions or disturbances of the reflexes of the legs which must have antedated the present condition, but which gave the patient no trouble and of which he was ignorant. Though the lesions are always widespread there are particular regions which are apt to be most affected and to cause the first striking symptoms. One of the commonest seats is the membrane at the base of the brain. As a result of this the cranial nerves, especially the motor nerves of the eyes, are apt to be affected very early. Given a case of binasal hemianopsia in which the course of the symptoms does not indicate disease of the pituitary body, the most likely cause is a specific meningitis in the region of the optic chiasm. Hemiplegia with oculomotor palsy on the opposite side indicates but does not prove syphilitic disease in the region of the crus. Left-sided hemiplegia with aphasia in a right-handed man does not mean that the speech centers are not in the left brain, but that there are multiple foci of disease, probably syphilitic.

In a strict sense syphilis never attacks exclusively the brain or the cord alone; both are always affected. The morbid process may, however, be so much more severe in one organ as to cause the symptoms referable to the other to be overlooked. The most nearly characteristic type of spinal syphilis is that described by Erb. It begins with a slowly increasing weakness and stiffness of the legs, frequently associated with paresthesias. Vaguely localized girdle sensations are complained of often. There may be hyperesthesia or actual pain in various parts of the body. Serious objective disturbances of sensibility do not occur. Weakness of the detrusor is a frequent bladder symptom. Constipation is frequent, rectal incontinence rare. Progressive sexual weakness often occurs. The final picture is that of a spastic paraplegia. Notwithstanding the spastic gait the muscle tension is low. The kneejerks are increased and ankle clonus is present. Bed sores are rare. Unfortunately this group of symptoms may arise from other causes, and syphilis may cause other symptoms. The safest rule for therapeutic purposes is to regard any case not showing the signs of distinct system disease, but due to a meningomyelitis as specific. It is gravely doubtful if a pure acute myelitis is ever syphilitic. There is, however, a difference of opinion among men competent to judge in this matter.

It is often important to determine the cause of epileptiform convulsions. True idiopathic epilepsy rarely begins after the thirty-fifth year, and given epileptiform convulsions beginning after that age without other symptoms of brain tumor or without some other manifest cause it is best to put the patient to the therapeutic test. The presence of the general symptoms of tumor, headache, vertigo, vomiting and choked disc, does not of course exclude syphilis, because a gumma may cause all of them. A syphilitic new growth is, however, apt to have associated with it symptoms due to meningitis or vascular disease in other regions of the brain; whereas in other tumors the symptoms are always, except in the rare case of multiple growths, referable to disease in one area alone.

A second characteristic of syphilis is the fleeting nature of certain symptoms. Transient palsies, hemiplegic, monoplegic or of the cranial nerves, aphasia and apoplectiform or epilepti-

form attacks are common. They are most frequently due to variations of the blood supply caused by disease of the vessels, but it is more than probable that sometimes they are the result of a toxin acting locally.

Syphilis may not only produce serious organic disease, but also cause a secondary neurasthenia in the proper sense of that much abused word. At a time when there is no evidence of any organic disease in active progress the patient may show all the signs of profound and apparently causeless neurasthenia. Physical weakness, mental tire, disordered digestion, leaky skin, emaciation, troubled sleep and emotionalism may all be present. The diagnosis cannot be made unless the history is known or there is evidence of an antecedent chancre or some organic manifestation appears. This condition is most apt to occur between the time of the disappearance of the secondary skin lesions and the appearance of tertiary visceral disease. It is important to remember the possibility of its existence when treating young men who, previously robust, have become causelessly weak. As a rule, treatment gives excellent results.

Finally I shall encroach a little on the domain of Dr. Christian and say a few words about therapeutics. Of course the two drugs which have any direct effect upon the specific process are potassium iodid and mercury. It is to be remembered, however, that in cases at all advanced there are present not only the new formed specific granulations, but necrotic, sclerosed or degenerated areas. Treatment will not affect these. Given, for example, the case of an old hemiplegic with thrombotic softening it is useless to fill him with physic in the hope that absorption will occur and new brain cells be created out of nothingness. Given a sclerosed and atrophied spinal cord, with nerve cells and fibres replaced by dense connective tissue, specific treatment will do no good. It may do harm. We all of us have seen old syphilitics suffering, not from any active process, but from the scars of the old disease, improve greatly by being taken off specific treatment and given tonics and food. Mercury and potassium iodid are only of great use during the active period of the disease. The best method of administering mercury is by inunction. I think that for diplomatic reasons it is wiser in private practice to use the ten per

cent. oleate than blue ointment. It should be used once or twice daily, a dram each time. I do not think that the gigantic doses of iodid that it is now customary to give do as much good as smaller quantities. A dram a day, given largely diluted with water, is surely enough, and often smaller doses are sufficient. If by the end of a month there is no good result, specific treatment ought to be stopped; but if there is any improvement and the patient stands treatment well it should be continued indefinitely. We too often overlook entirely the necessity for general treatment. Syphilitics need food and air and exercise, or if they are bedridden massage and baths. Iron and arsenic and cod liver oil are of great value.

THE TREATMENT OF SYPHILIS.*

BY H. M. CHRISTIAN, M.D., OF PHILADELPHIA, PA.

Syphilis, occurring among the upper and middle classes of our people, in individuals endowed with good health and of fairly good habits, if seen early in the secondary stages of the disease and promptly and properly treated, is, in the great majority of cases, a perfectly curable disease. This is a proposition generally accepted as true at the present day, by those having the widest experience in the treatment of the disease. Equally well recognized is the fact that syphilis occurring among the half-starved and half-washed members of the community, and in habitual drunkards, cannot be cured. The same can be said for cases having once developed tertiary lesions. Treatment can cause their disappearance, but cannot now cure the disease. It would seem to the writer as if the time was ripe to call a halt on the spirit of ultra pessimism which has so long possessed the medical profession at large on the subject of the curability of syphilis and which is so largely responsible for the attitude of the laity on the matter, so many of whom upon being told that they have contracted syphilis manifest a keen desire to write their wills and go in search of a revolver. There is, I am sure, in nearly every community of any size in this land, men of business and social

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prominence occupying positions of trust and honor, who have at one time in their lives contracted syphilis, who have been cured and are the fathers of many healthy children. Granting then that the disease is capable of being cured the first question that naturally arises is, when shall constitutional treatment be instituted. I think that it is pretty generally admitted today that by far the safer plan is to wait for the evolution of cutaneous lesions before beginning constitutional treatment. The reasons for so doing are very obvious to those who have looked at all closely into this subject. In the first place, notwithstanding the parallel column of differential diagnosis between chancre and chancroid given in the textbooks, those having the widest experience in the diagnosis and treatment of these conditions will agree with me, I am sure, that in very many, if not a majority of instances, an absolute diagnosis cannot be made. Again it is a well-developed clinical fact that the early administration of mercury does not in any way avert the disease or prevent the appearance of an eruption. It has only been found to modify the character and time of development of the skin manifestations; in other words, the evolution of the constitutional signs of the disease is materially deranged. One can readily appreciate the hopeless confusion in the mind of the physician who, having mistakenly diagnosed a chancroid as a chancre, has pronounced the patient to have syphilis, has instituted immediate constitutional treatment, and subsequently finds that the expected rash fails to materialize. The uncertainty in the mind of the physician is of small moment, however, compared with the impression his recklessly spoken words have made upon the mind of the hapless patient, an impression that no time will ever eradicate. There is nothing to be lost and everything to be gained by waiting six or seven weeks for the normal evolution of the disease. There are, however, some conditions than arise occasionally that call for the early administration of mercury. These are: (1) when the chancre is located on the lip. (2) When from its position it may lead to the infection of others, as on the finger of the surgeon, obstetrician or hospital orderly; or on the nipple of a nursing woman. (3) In those rare instances in which the initial lesion becomes phagedenic and threatens to destroy the prepuce or glans

penie. In taking up in detail the consideration of the treatment of secondary syphilis it is well to recognize three types of the disease that are usually encountered: (1) the benign form; (2) the benign form with a tendency to relapse; (3) a severe form of the affection. The particular type which the disease assumes is, of course, as in all infectious diseases, dependent upon the dose of the poison received and the fertility of the soil on which it is deposited. I think that there is little doubt but that the majority of the cases of secondary syphilis seen today, at least among the better classes, are of the benign type. Here the macular rash appears at the proper time and is fairly well distributed over the trunk and limbs, rarely on the face. Accompanying the rash there is general adenopathy, with more or less sore throat, and some few mucous patches perhaps in the mouth with little if any alopecia. In this type of syphilis it will generally be found that the internal administration of mercury protiodid, one-third of a grain three times daily, will probably be all that is necessary to bring about a prompt disappearance of the eruption. If, however, this should prove rather slow in fading away a fourth pill can be given at bedtime. As a rule, this is all that is indicated. In these cases the type of the disease is so, comparatively speaking, mild that there is constant danger that the patient, unless warned to the contrary, may break away from all treatment, considering himself as entirely cured, thereby laying the foundation for the development of tertiary lesions at a subsequent time. The second type of the affection is most apt to be found developing in individuals whose general system is somewhat below par, addicted, perhaps, to the excessive use of alcohol and tobacco. In these patients the evolution of the cutaneous lesions is perfectly regular, but it soon becomes manifest that there is a constant tendency to the recurrence of mucous patches on the tongue, lips and buccal mucous membrane. The original erythema is slow to disappear and the papular form of lesion appears very early. Recurrent moist papules about the anus and scrotum are frequently noted. In this variety of syphilis I have found the tonic treatment with mercury so strongly advised by Keys to be the best. My method in such cases is to instruct the patient to take an extra mercury protiodid pill every other day until the teeth

become tender or the gums bleed when lightly touched. The number of pills required to attain this result is divided by two, and the result constitutes the patient's daily tonic dose of mercury. Should there appear at any time during the secondary stage a fresh outbreak of a rash or mucous patches, the patient can be placed temporarily upon his maximum dose, which is of course known.

The third type of secondary syphilis presents a much more different proposition than either of the others just described. In these cases there is preceding the rash a marked leukocytosis with the decided loss of flesh. The appearance of the macular rash is accompanied with all the symptoms of an eruptive fever, headache, rise of temperature and nocturnal osteocopic pains. The erythematous lesions are rapidly followed by the appearance of a widely diffused papular and papulosquamous eruption. It is useless in these cases to lose valuable time in relying solely upon internal medication. Moreover, in the majority of these cases the gastrointestinal tract is so greatly disturbed that mercury given by the mouth will not only not be assimilated, but will greatly aid to increase the gastrointestinal derangement. Mercurial inunctions constitute our only effective weapon in these cases if we wish to gain the mastery over the disease. The preparation most commonly employed is the officinal mercurial ointment, one dram of it being rubbed well in on different parts of the body in succession night and morning. The patient in addition wears constantly an abdominal bandage on the inner side of which is spread a thin layer of the ointment. Mercury vasogen is a rather recent compound which I have used quite a little and have come to believe that it is more rapidly absorbed and therefore more effective in controlling the disease than the older blue ointment.

One great objection to the use of mercurial inunctions in the local dermatitis often produced by their prolonged use. This can generally be avoided if the skin be thoroughly cleaned with green soap and alcohol prior to employing the inunction. Frequent warm salt water baths constitute a most important and valuable adjunct to the treatment by inunction. It is wise at times to omit the inunctions for a day or two, especially if there is noted any tenderness of the gums or soreness of the

teeth. When the skin lesions have disappeared and the general condition is good, it is advisable to discontinue the inunctions and place the patient upon the internal use of mercury protiodid.

If subsequently during the secondary stage other manifestations of syphilis appear, another course of inunctions should be pursued.

These three forms are, I think, fairly representative of the types of secondary syphilis as encountered in practice. There is another type, the precocious malignant form, only seen as a rule among the lower classes of the community and where there are poor hygienic surroundings.

There are several preparations of mercury which it might be well to mention, all of which can be employed to great advantage alternately. The protiodid pill of Garnier and Lameureux causes less digestive disturbance, I think, than the American pill; to be sure, this may be due to the fact that it is only one-half quantity. Mercury and chalk, the favorite combination of Jonathan Hutchinson, is a very useful preparation to employ temporarily in cases in which the protiodid causes some diarrhea; but it has always seemed to me as being too attenuated a remedy to be of any real service during the active stage of the disease. Another preparation of mercury recently placed before the profession is mercuriol, which I have found very useful to use alternately with the protiodid; administered in one grain doses three or four times daily it will be found very valuable in cases in which the ordinary preparations of mercury cannot be assimilated.

The particular preparation of mercury to be employed during the secondary stage of syphilis is not near so important a matter as is the necessity of impressing upon the patient the fact that, in order to give himself the best chance of making a permanent recovery, a continuous course of treatment for eighteen months will be required. At the outset of treatment the patient's weight is the best criterion as to the action of the remedy upon the disease. If the weight does not increase, or on the other hand gradually decreases, either too much or too little mercury is being administered, or the wrong preparation is being employed.

Too much stress cannot be laid upon the injunction that the

patient should be treated as well as the disease. Cod liver oil, iron, quinin and whisky have time and again proven of service, equal almost to that of mercury in the treatment of the early stages of secondary syphilis.

After one and one-half years of active mercurial treatment the patient should be placed upon the mixed treatment usually employed in the tertiary stage of the disease. If there are no tertiary lesions present in the case, the mildest form of mixed treatment is all that is necessary. This can be one-twelfth of a grain of mercury bichlorid, or one-twentieth of a grain of mercury biniodid combined with two to five grains of potassium iodid administered three times daily. This treatment should be kept up steadily for the space of one year. In those cases in which potassium iodid deranges the digestion it can be given alone in milk or the syrup of hydriodic acid in combination with mercury bichlorid can be used. After a year of mixed treatment similar to this, a course of intermittent treatment should be instituted for about six months, at the end of which time, should no lesions appear, all treatment can be safely discontinued.

I want to reiterate my belief that a course of treatment such as just described, if faithfully carried out, will bring about a cure in seventy-five per cent. of cases of syphilis occurring in individuals possessing good general health, good habits and living under proper hygienic conditions. When tertiary lesions have once appeared I do not feel that we are ever justified in promising a permanent cure. All we can expect to do under such circumstances by treatment is to bring about the absorption of the lesions. At the same time, we should insist upon a prolonged continuous course of treatment, with the view of preventing any subsequent return.

In cases of ulcerating tubercular, syphilodermata and gum-mata the best results can be obtained by employing potassium iodid in from ten to twelve grain doses three times daily, together with the use of mercurial inunctions twice daily. Personally, I am thoroughly convinced of the fact that mercury is equally as valuable a remedy in tertiary as in secondary syphilis, and that its use in connection with moderate doses of potassium iodid will be found to prove much more effective than the sole employment of enormous doses of potassium iodid.

DISCUSSION.

DR. ROBERT N. WILLSON: A man has just left the Philadelphia Hospital who for months was looked upon as having a tuberculous process at the base of his right lung. Two weeks before he entered the Hospital he began to expectorate blood mixed with a large quantity of grayish-yellow mucus, and during most of the time he was in the ward he expectorated the same material. No tubercle bacilli were ever found, but large numbers of streptococci and of diplococci were found in this sputum. Dr. Salinger suggested that the mixed treatment be used; but the day before the order was instituted, Dr. Hughes, in his clinic, punctured the pleural cavity, thinking there was fluid present, and opened a small cavity from which he extracted a syringeful of blood. A few days after antisypilitic treatment was begun all bleeding from the mouth had stopped. The signs of consolidation gradually disappeared and the man left the hospital with almost complete disappearance of the physical signs previously noted over his lung. The man at no time remembered a cutaneous lesion and would not acknowledge either a chancre or any syphilitic exposure. I always notice that when specialists in genitourinary work or in cutaneous lesions speak of this disease they omit reference to the fact that a case of syphilis may occur without visible early skin lesion. I have often discussed this question with them and have even heard an occasional absolute denial of such a possibility. It is my own belief that cases can occur without early cutaneous lesions. I recently saw a patient who had probably been infected with syphilis last July. At the time I first saw him he had only a profuse purulent discharge from the urethra which was full of gonococci. Months after sore throat developed and continued to a considerable time without treatment. Finally the patient awoke one morning to find that the palms of his hands and soles of his feet were covered with a pink papulosquamous eruption, the first sign since infection, six months before. Dr. Martin felt sure that the eruption was not due to syphilis, but was the result of the use of balsam of copaiba. The patient was treated with this idea for six or eight weeks. But within two weeks from the institution of mixed treatment the eruption, the sore throat and the alopecia disappeared, and to-day he is absolutely free

from all symptoms. I would like to ask Dr. Christian whether it has not also been his experience that such cases sometimes occur without any hint at diagnosis in the way of cutaneous lesions.

DR. A. E. ROUSSEL: About ten years ago I reported to this Society an interesting case of malignant syphilis that presented unique features, the most important of which was the appearance of a gummatous condition of the hard palate resulting in perforation ten weeks after the initial sore and while the secondary rash was still in evidence. Another point of interest in connection with this case was the fact that mercury, no matter now administered, internally, hypodermically, by inunction or by fumigation, could not be borne. It was followed by the occurrence of a marked diarrhea and other gastrointestinal symptoms. The case went from bad to worse. Other forms of treatment were tried. The patient subsequently developed a syphilitic boulimia, a syphilitic constriction of the esophagus, and died in a year's time. The point of interest was that the mercury produced the same gastrointestinal symptoms, no matter how administered. It has been my experience, and the teaching of the French authorities, particularly Fournier, that many patients who bear the administration of mercury badly can take large doses for a longer course of time, provided the teeth are first placed in good condition and the mouth is kept clean. In many patients after having been saturated with mercury, the case comes to a standstill. In such cases tonic treatment alone, or perhaps a cessation of all therapeutic treatment and the adoption of hygienic measures, produces the best results. In many instances the cases that have shown mild secondary eruptions are those that show a larger relative proportion of marked tertiary lesions. This is doubtless due to the fact that these patients do not remain under treatment a sufficiently long time for the proper elimination of the poison. Some of the older authorities say that the late eruptions are followed by severe tertiary lesions, irrespective of the treatment. The lack of treatment is probably a better reason for these particular occurrences.

DR. E. HOLLINGSWORTH SITER: I recall a case of gumma of both testicles, in which a diagnosis of tuberculosis of both

testicles had been made after the patient had responded to the tuberculin test. Castration was to have been done the next day. I told the physician in charge that I knew that the patient had an old syphilitic history and that it might possibly be well to try some mixed treatment first. The man responded to treatment and the gumma almost disappeared. I have recently seen a number of cases in which the eruption of scabies has been mistaken for that of syphilis. The principal reason for the error in diagnosis is the absence of burrows in the webs of the fingers. I have seen a number of cases of scabies without burrows between the fingers, although I believe that is stated to be a diagnostic sign.

DR. R. O. KEVIN: About one year ago I had a case of syphilis in which liver symptoms, such as have been mentioned, developed. I have seen a good deal of syphilis, but this is the only case of liver syphilis in private practice that has come under my notice. During the attack my patient developed marked jaundice, despite large doses of mercury administered through all the recognized channels, nor was potassium iodid of any service: my patient perished. Marshall, of Dublin, was the first physician, I believe, to use potassium iodid in the tertiary lesions of syphilis, in 1822. Whitla, of Belfast, first pointed out the importance of watching the body weight referred to by Dr. Christian. Hypodermically I have found gray oil in late syphilis of great value, while at the same time iodid may be given internally. I agree with Dr. Christian that very large doses of iodid are not indicated and sometimes do more harm than good. Dr. Amilon, of this city, has recently introduced a method of treatment, that of Professor Möller, of Stockholm. The preparation he employs is a mixture or amalgam of mercury, aluminum magnesium and almond oil introduced into the circulation hypodermically. Dr. Amilon plunges the needle, which is over two inches long, straight into the gluteal muscles. He then withdraws the syringe, leaving the needle *in situ*, sees that no blood comes out of the needle, readjusts his syringe and injects the mercurial preparation. I have seen the eruption of secondary syphilis disappear more rapidly from this method of treatment than from any other. Möller's method is at present being largely used in Professor Horwitz's clinic at the Jefferson

Hospital in tertiary syphilis, and I believe the profession will hear more of it later on. Möller does not think so favorably of mercurial inunctions as some of the rest of us. It has been pretty well proven that relapses are less frequent after inunctions than after the usual method of administering mercury. Fournier's method consists in administering mercury during three or four years after the chancre but at increasing intervals; during the intervals of mercurial treatment he gives iodid. Neisser, on the contrary, prefers frictions and injections. Blaschko, in the *Berliner klinische Wochenschrift*, states that cases improve more readily when there is increased muscular action, such as riding, rowing, hot baths, etc., etc. At the present time I have a patient who has a rather obstinate case of syphilis. The man has had charge of the cold storage department of a large hotel in this city. I advised him to change his occupation, and he is now a cook. He sweats profusely, he tells me, and his case has improved very much since he began his new employment.

DR. J. F. E. COLGAN: Professor DaCosta on one occasion had a patient in clinic in whom the diagnosis lay between gumma of the lung and tuberculosis. It was finally decided that there was gumma of the lung.

DR. ERNEST LAPLACE: There are a great many patients who have syphilis and who are apparently cured, but in whom the slightest traumatism will call into existence some manifestation of the disease. By traumatism I mean a slight spontaneous injury or an injury inflicted by the surgeon in the performance of a necessary surgical operation. The manifestations of syphilis under these circumstances are most protean; for example, a tumor may follow such a traumatism, which may resemble epithelioma, or there may be proliferation of fibrous tissue, behind the peritoneum for example, simulating a retroperitoneal sarcoma to such an extent that it may be pronounced inoperable. If treated with antisyphilitic remedies such a growth will disappear. In a case in which syphilis has been apparently cured, a wound which ought to do well will suddenly take a queer turn, a grayish slough will appear and continue, until by examination some old traces of syphilis are discovered, which will indicate the proper method for the healthy restoration of that wound careful specific treatment.

DR. A. A. ESHNER: One occasionally sees cases of suspected syphilis, in which, if there have been cutaneous manifestations, they have been overlooked on the part of the patient, and one naturally remains in doubt whether or not he shall institute treatment. It has seemed to me, as Dr. Willson has indicated, that occasionally there may be cases of syphilis in which cutaneous manifestations do not appear, but in which, after the lapse of a considerable interval of time, the gravest symptoms of syphilis arise. It is on this account that I have sometimes raised the question whether in cases in which the history, the primary lesion and the attendant circumstances render a diagnosis of syphilis as nearly as possible positive, it would not be better to begin the administration of mercury at once, without waiting for the appearance of cutaneous manifestations that may never appear, until the patient is overwhelmed by the development of grave nervous and perhaps other visceral lesions.

DR. SCHAMBERG: The queries of Dr. Willson and Dr. Eshner recall to my mind a sergeant in the army whom I saw about 2 years with a syphiloderm upon the palms of his hands. He was an intelligent man of careful bodily habits, but never knew of any manifestation upon the skin antecedent to the palmar eruption. I believe that in unusual instances the secondary roseola may be so slight as not to be visible except upon close inspection in proper light. While the eruption it commonly overlooked and not noticed, I believe it possible in rare cases for it to be clinically absent. I believe that Dr. Christian's proposition not to begin treatment before the appearance of the secondary eruption is really a safe one. However, theoretically, this is not a good plan, and I believe when the diagnosis can be firmly established before the appearance of the eruption it is advisable to begin the treatment as soon as the diagnosis is made. In one of my patients in whom the diagnosis was made from the presence of an initial lesion of sclerotic hardness, an indurated lymphangitis and enlargement of the neighboring lymphatic glands, the institution of vigorous mercurial inunctions prevented the oncoming symptoms, and the man never had a cutaneous outbreak, although he was under daily inspection for a long time. He did some months later have ulceration of the tonsils and of the posterior pharynx.

geal wall. During the time that we are waiting for the secondary eruption to appear there is doubtless a proliferation of the germ of syphilis and an increased production of toxins in the system with the production of noxious effects upon the tissues generally. In no other disease do we wait for such a condition of affairs if it is possible to diagnose and treat it before that time. I believe with Dr. Christian that it is undesirable to begin constitutional treatment if there is any doubt as to diagnosis existing in the mind of the physician, and furthermore, that, as a rule, the diagnosis is not perfectly clear until the secondaries appear. There is nothing so destructive to the carrying out of a proper treatment as uncertainty. The comparative merits of the various methods of treatment of syphilis need not be long considered. That which is desired is the introduction of a certain amount of mercury into the blood. It matters not by what channel it is introduced so long as it gets there. It may be given by the mouth, by hypodermic injection, by inunction or by inhalation. The point to remember is that mercury in the gastrointestinal tract or in an insoluble form beneath the skin is, properly speaking, not in the system. When mercury produces a diarrhea the patient is absorbing very little of the drug. The dose is largely a matter of individuality, as with all drugs. I believe there is no better method than that of carefully carried out mercurial inunctions. But that term, carefully carried out mercurial inunctions, means much. It does not indicate merely rubbing on to the skin a certain amount of mercury. The inunction can best be done by a second person. When a patient can afford it, I usually have a masseur rub the ointment into the skin, preferably over the back. In some cases the rubbing is continued for an hour. The dose of mercury and the duration of the inunction depend upon the effect. In dealing with obstinate, late syphilitic manifestations of the skin it is my rule to make an impression either upon the disease or the patient. If the disease fails to yield and the patient shows no effect of the drug, the drug must either be increased or the duration of the inunction prolonged. In the use of mercurial inunctions it is advisable to dilute the ointment with lanolin, first—because this is a most absorbable ointment base and probably increases the absorbability of the mercury, and second, because

it lessens the irritant effect of the mercurial ointment upon the skin, I have had some experience with the hypodermic treatment of syphilis. The soluble preparations appear to me to be preferable and I usually employ mercury bichlorid. In a series of 350 injections I have been fortunate not to have produced an abscess, although I have frequently seen localized indurations result. I believe that the hypodermic treatment is to be reserved for special indications and should not be used as a routine measure. In one patient in whom I employed injections of mercury no other method was available. Mercury by mouth in sufficient dosage could not be tolerated, and inunctions invariably produced a dermatitis.

DR. CHRISTIAN: The point brought out by Dr. Roussell is one that I endeavored to emphasize in my paper, i. e., that the patient is always to be treated as well as the disease, and that during the treatment of a case of syphilis it is often advisable to suspend specific treatment temporarily. Cases of precocious malignant syphilis are fortunately rare, and are encountered, as a rule, only in dispensary practice. In these cases tertiary ulcerative lesions appear within the first few months, and there is always marked cachexia with emaciation. Another question that always enters my mind when discussing syphilis is whether we are always justified in jumping at the conclusion that because some obscure condition or certain local lesions are benefitted or cured by the administration of mercury and potassium iodid, that therefore the patient must have syphilis. This is a time-honored tradition, I know, and is still taught and practiced; but I have never been able to entirely satisfy my own mind on the matter and often wondered whether it is not perfectly possible for these drugs to cure something else than syphilis.

THE TREATMENT OF SEROUS EFFUSIONS.*

ABSTRACT OF A CLINICAL LECTURE DELIVERED AT THE
LIVERPOOL ROYAL INFIRMARY.

BY JAMES BARR, M.D., F.R.C.P.

The author describes what is evidently a new method of treating serous effusions. The idea occurred to him to inject one fluidrachm of adrenalin chloride solution into the pleural sac, in a case of abdominal cancer extending to the pleura, after the aspiration of a large quantity of bloody serum, the object of the injection being to lessen the secretion. There was no further secretion, consequently no further tapping, and the patient spent the remainder of her life in perfect comfort so far as her chest was concerned.

This treatment was extended to cases of ascites due to hepatic cirrhosis in which marked results were not expected. However, the rapidity of secretion was diminished and no ill effects were noted, the quantity of adrenalin solution used varying from two to three fluidrachms.

In a case of pericarditis with effusion, in a lad, 19 fluid-ounces of serum was withdrawn from the pericardium, but a reaccumulation rapidly followed. The patient's condition becoming critical the paracentesis was repeated, 20 ounces of fluid being withdrawn with immediate improvement in the quality of the pulse. Forty minims of solution adrenalin chloride, 1-1000, was injected into the pericardium. The pulse at the wrist disappeared, the boy became of an ashy leaden hue and had an anxious expression. Immediately nitroglycerin and atropin were administered and the boy quickly rallied. No further tapping was required. The same patient had a subsequent attack of left pleurisy with effusion. Ten fluid ounces of serum was withdrawn from the chest and one fluidrachm of adrenalin chloride solution was injected. There was no reaccumulation.

In a case of tuberculous peritonitis and ascites 200 fluid-ounces of serum was drawn and two fluidrachms of solution adrenalin chloride introduced into the peritoneal cavity, with four pints of aseptic air (to prevent adhesions). Thirteen days later 237 fluid-ounces of serum was withdrawn and two

**The British Medical Journal*, March 19, 1904.

fluidrachms of adrenalin chloride solution and two pints of air were injected. Upon a third occasion, eleven days later, 196 fluid-ounces of serum was obtained by tapping, and three fluidrachms of adrenalin chloride solution and four pints of sterile air were injected. No reaccumulation of fluid occurred.

A female child of seven years was the next patient. One pint of fluid was withdrawn from her pleural cavity and one fluidrachm of adrenalin chloride solution and half a pint of sterile air were injected. Though it was highly probable that the pleurisy was tuberculous, there was no reaccumulation of fluid and the patient recovered.

A Druggist's Commendable Innovation.—Many of our confres, in the past, have had printed upon their prescription blanks a warning to the patient not to have the prescription repeated without especial instructions from the prescriber; this in order to protect the patient, not only from his own ignorance, but from the possible predacious qualities of an unscrupulous pharmacist in the patient's town or elsewhere. We commend the action of a druggist of Grand Rapids, Mich., a pioneer, we believe, in this line, who, we learn from the *American Druggist*, makes a regular practice of attaching a small label to each bottle or package, bearing the following legend: "More harm than good is sometimes done by refilling a prescription, so consult your physician before getting this refilled."

The above has appeared in the columns of the *New York Medical Journal* and almost sounds too good to be true. Were we not convinced of the veracity of our esteemed contemporary we might doubt it. However, the action of the druggist mentioned is so rare that the *American Druggist* should have published the name of such a *rara aris in terram*.

THE ST. LOUIS Medical and Surgical Journal.

A. H. OHMANN-DUMESNIL, A.M., M.D.,
Editor and Proprietor.
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EDITORIAL.

MEDICAL SOCIETIES.

The constantly recurring meetings of medical associations are certainly to be looked upon as a cause for congratulation by members of the medical profession. The State and national associations are certainly the best means of promoting professional comity and of fostering that spirit of solidarity which should characterize men whose aims and purposes are cast along the same lines. One of the great advantages of these meetings is that they permit of the renewal of old friendships and the formation of new ones. To the younger members of the medical profession they furnish the often long desired, long cherished desire of personally conversing with those whom they have only known by their books and other published writings. They can thus obtain opinions which whilst as authoritative are not given in as formal a manner as when they are published with an eye to possible criticism.

Whilst the purely scientific part, more particularly as evidenced by the discussions, are of the utmost value and, by

themselves alone, constitute an attractive feature, their value is still more enhanced by the fact that they often share of the nature of scientific battles between giants in which the keenest reasoning and the best logic form the arms in this logical warfare. It is by a close attention to these discussions that the various pitfalls which beset the path of the too enthusiastic beginner are pointed out and he learns how to avoid them and become careful, and arriving at premature conclusions in such as are not justified by the premises. The close attention of every one attending these meetings is certainly a *sine qua non*, or else the entire matter resolves itself into a failure so far as any results are concerned. Such meetings show the utility of medical societies which, whilst always of advantage, are still more so when attended by medical men from many different points of the country.

Among the important congresses which are to be held in St. Louis are the Congress on Tuberculosis and the International Congress of Military Surgeons. Both of these are important societies and will no doubt hold sessions that will result in much good for the benefit of humanity. They are a development of the small local medical society and, like all large medical gatherings, result in a certain measure to the advance of medical knowledge.

Association of Military Surgeons of the United States.—The Thirteenth annual meeting of this Association will take place at St. Louis, October 10 to 15, 1904. It will also constitute the International Congress of Military, and this will add in no small degree to its importance. The officers of the Association are as follows: President, Medical Director John C. Wise, U.S.N., Warrenton, Va.; First Vice President, Surgeon-General Walter Wyman, P.H. and M.H.S., Washington, D. C.; Second Vice President, Major Albert H. Briggs, N.G.N.Y., Buffalo, N. Y.; Third Vice President, Brig.-Gen. Robert M. O'Reilly, U.S.A., Washington, D. C.; Secretary, Major James Evelyn Pilcher, U.S.V., Carlisle, Pa.; Treasurer, Major Herbert A. Arnold, N.G.Pa., Ardmore, Pa. A large attendance is expected, and the papers which will be contributed will be of the highest value to visiting surgeons.

BOOK REVIEWS.

International Clinics. A Quarterly of Illustrated Clinical Lectures, and especially prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by A. O. J. KELLEY, A.M., M.D., with the Collaboration of WM. OSLER, M.D., JOHN H. MUSSER, M.D., J. B. MURPHY, M.D., JAS. STEWART, M.D., A. MCPHEDRAN, M.D., THOS. M. ROTCH, M.D., JOHN G. CLARK, M.D., JAMES J. WALSH, M.D., J. W. BALLANTYNE, M.D., JOHN HAROLD, M.D., EDMUND LANDOLT, M.D., RICHARD KRETZ, A. M. With Regular Correspondents in Montreal, London, Paris, Vienna, Leipsic, Brussels, and Carlsbad. Vol. I., Fourteenth Series, 1904. 8vo. pp. 304. Illustrated. [Philadelphia: J. B. Lippincott Co. 1903. Price, \$2.00 net.

We once more have the pleasure of having the opportunity of reviewing a number of *International Clinics*, a quarterly publication which has assumed international proportions, its contributors as well as editorial staff including in their number the leading teachers and writers of both America and Europe. They are all recognized authorities, and whatever emanates from their pens is certainly above the average and deserving of the closest attention and study. In fact, the volumes constitute as good a post-graduate curriculum as could very well be obtained outside the walls of a college or university. In addition to this we are brought in contact with men whom we could not hope to know otherwise, even were the time and money necessary to do so available.

The present volume is without doubt a most superior one both in the character of its contents and of its illustrations, which are numerous and include two very well executed plates. In the portion devoted to Treatment an excellent article is that by F. Widal and N. Juval on the Chlorid Reduction Treatment of Parenchymatous Nephritis. Adonidin: A Clinical Study by Reynold Webb Wilcox, is a valuable contribution to Therapeutics. What is the cure for Neurasthenia by Robert T. Edes and the Treatment of Gastric Neurasthenia and Allied Conditions by George W. McCaskey will be read with much interest. Whilst there are but four articles devoted to the subject of Medicine each one is of the highest interest. Henry W. Cattell, formerly Editor of the *International Clinics*, is represented by a very

interesting as well as valuable article on the Practical Application of Cryoscopy to Medicine. The Early Diagnosis of Pulmonary Tuberculosis by James J. Walsh is a contribution which will prove of the highest interest and utility to medical practitioners.

Surgery is particularly well represented in this volume. Angioma and its Treatment receiving a thorough discussion at the hands of Carl Beck. The paper is thoroughly illustrated with half tones and two colored plates. John G. Clark and John W. Luther present a well illustrated Critical Review of Methods of Intestinal Anastomosis, with especial Reference to the Connell Suture. A Report of Five Cases. This will prove of especial interest to surgeons as well as the Observations upon Gastric, Intestinal and Liver Surgery in the German Clinics by Charles P. Noble. In the department of Gynecology there are two articles which are to be highly commended as they are destined to exercise some influence in restraining the operation madness. Francis H. Davenport on the Non-Operative Treatment of Inflammations of the Genital Tract and Daniel H. Craig on the Non-Operative Treatment of Chronic Ovarian Lesions have by these papers conferred a boon on suffering womankind and done much to improve the practice of gynecology. Neurology is represented by one paper on Peripheral Neuritis by William Broaddus Pritchard.

This volume concludes with a well written review of the Progress of Medicine during 1903. This is a very carefully edited portion and evidences much discrimination and judgment on the part of its writers. Medicine is taken up by David C. Edsall, Surgery by Joseph C. Bloodgood, and Treatment by A. A. Stevens. A number of illustrations are introduced and the entire review is introduced in a classified form, thus making it capable of being referred to in a manner which is both easy and satisfactory. This review alone takes up 115 pages and is a good departure as it gives much information not easily obtainable by the majority of physicians.

We have not attempted to give a complete review of this volume, but sufficient has been said to enable our readers to form an opinion of this excellent number. The publishers have excelled their previous good record in the mechanical execution of this book and it is simply stating a fact that they have surpassed all former efforts. When we consider the amount of high grade reading material furnished, the handsome printing and illustrations as well as the binding, it is certainly a marvel of cheapness at the price at which it is offered. We can safely say that those of our readers who obtain the International Clinics will be delighted with their investment and those who do not will have occasion to regret not having done so.

A Practical Treatise on Medical Diagnosis. For Students and Physicians. By JOHN H. MUSSEY, M.D. Fifth Edition. Revised and Enlarged. 8vo. pp. 1213. Illustrated with 395 Woodcuts and 63 Colored Plates. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, cloth, \$6.50; leather, \$7.50; half morocco, \$8.00 net.

We have, of late, been presented with some very capable works dealing with the subject of diagnosis in medicine, but we very much doubt that the superior of the one before us has reached the hands of the English reading portion of the medical profession. And it is also a noteworthy fact that those which have appeared in this country were translations of the works of continental teachers. It is for this reason, as well as for others which might be brought forward, that we should feel more than ordinarily pleased at the appearance of Mussey's work. It adds another reason to our claims of coming to the forefront in medicine and strengthens whatever pride we may have expressed regarding our medical men and their good work done in the way of advancing medicine in all of its branches, both theoretical and practical.

That the work before us is a standard authority on its subject is an acknowledged fact and that this has been accepted is evidenced by the fact that it is now in its fourth edition. All the editions have appeared at sufficiently short periods of frequency to enable the author to be always up to date in a department which is continuously making demands for this. This work is not merely a short text-book, but it is a work which will thoroughly equip the physician in that most essential quality for successful therapeutics—accurate diagnosis. Furnishing the student of its pages with this foundation the superstructure of successful treatment is a foregone conclusion, and he who masters the contents of the volume before us will feel his mastery of the subject just as others will be forced to recognize it. We are by no means exaggerating the importance and value of the work, as can be readily appreciated by any one who will obtain it and carefully study its pages with the determination of learning its contents.

The arrangement of the work has been completely changed in this edition and the purely theoretical considerations have been condensed. This has permitted the addition of one hundred pages and more thorough explanation of practical points. All of these changes have brought about a complete rewriting of the entire work, so that, in its present form, it is practically a new book, containing the latest, presented in the most logical and rational manner to enable the proper approaching of a diagnosis in actual practice. The book is divided into two parts: Part I. is on General Diagnosis, and Part II. on Special Diagnosis. Part I. is again divided into six sections: Section

I. deals with General Considerations; Section II. is given to Historical Diagnosis or Data Obtained by Inquiry; Section III. Works of Subjective Diagnosis or Data Obtained by Inquiry; Section IV. takes up Objective Diagnosis or Data obtained by Observation, including the examination of all organs and viscera; Section V. is concerned with Physical Diagnosis, including the Roentgen ray in medical diagnosis; and Section VI. takes up Laboratory Diagnosis, which is by no means the least important of the methods employed. Part II., on Special Diagnosis, takes up the different diseases of the various organs and their diagnosis.

We can hardly dwell upon all of the good points presented by this book, but may be permitted to call attention to a few. Thus, the urine and its proper examination is given in a most thorough and scientific manner, and bacteriology is given its full share of prominence. The lungs and heart are accorded that amount of consideration which the importance of their diseases demands. The blood and its examination is also entered into in a very satisfactory manner. Diseases of the nervous system receive a large share of attention, as is but right and proper. General and systemic diseases are also properly considered in a very clear and lucid manner.

In this edition the number of illustrations has been nearly doubled and fourteen new colored plates have been added. The volume stands to-day as the most lavishly illustrated work ever published on diagnosis. This has not been extravagantly done, but the pictures have been well distributed and they cannot but be of the greatest help to the physician. The teacher will find them of the greatest help in making students pass a higher grade in their examinations. The publishers have made a handsome volume of this and they and the author are to be congratulated upon the completion of this excellent work.

A Manual of Fever Nursing. By REYNOLD WEBB WILCOX. M.A., M.D., LL.D. 12mo. pp. 236. Illustrated. [Philadelphia: P. Blackiston's Son & Co. 1904. Price, \$1.00 net.

In this little book the author has presented the medical profession with a hand-book of the highest value to nurses and one which will prove most useful to physicians as well. The subject is treated thoroughly and exhaustively and the guide followed by the author has been his lectures to the nurses of St. Mark's Hospital of New York City. The book is divided into nine chapters, which are respectively devoted to fever, its definition and diagnosis, and its general treatment. Then the nurse, the sick-room and its furniture, the patient, etc., are considered. Infections of continued type and the same with

local manifestations are noted. Infections of intermittent type are next taken up and, following this, the exanthemata. The concluding chapter deals with thermic fever. The book is a well written one and practical in every detail. The author is a well known writer, who has made many valuable contributions to medical literature. We feel certain that his little work will be eagerly taken up by trained nurses and we unhesitatingly recommend it to them as well as to their teacher. It is a timely work and full of good suggestions, useful to patients, nurses and physicians alike.

Missouri Botanical Garden. Fiftieth Annual Report. 8vo. pp. 129. With 45 plates. [St. Louis: Published by the Board of Trustees. 1904.

The volume before us comprises two well written articles, one, the longer one, being on Ecological Comparison of Some Typical Swamp Areas, by Samuel Woods Coulter. This was a thesis presented to the Faculty of Washington University, in candidacy for the degree of Ph.D., April 1903. It is a paper of 71 pages, illustrated with 22 plates and written in a manner that will waken the interest of all who are concerned in the study of botany the world over. The second paper is on Two Fungi Growing in Holes Made by Wood-Boring Insects, by Perley Spaulding. The third contribution is on Ecologically Aberrant Begonia. The final, thoroughly well illustrated contribution by William Trélease is on the Aberrant Veil Relics in some Edible Agarics. The entire volume is well edited by Dr. Trélease, the efficient Director of the Garden, and he deserves much credit, not only for the character of this report, but for the rapidity with which he has prepared it. It will prove invaluable to botanists like its predecessors have.

The Medical News Pocket Formulary. By E. QUIN THORNTON M.D. Long 18mo. pp. 287. New (Sixth) Edition. [Philadelphia and New York: Lea Brothers & Co. 1904. Leather, wallet shape for the pocket, price, \$1.50 net.

The author does not present this little book as a substitute for the larger works on therapeutics, but rather in the way of a reminder of many pertinent suggestions. He very probably indicates in what stages certain formulas are indicated and each one is followed by a few but very instructive annotations. These little discriminating remarks are what give added value to this therapeutic memorandum book. Whilst not omitting the older remedies of proven worth, he does not forget to introduce us to the newer remedies; but, here again, he only deals with those which have been tried and tested. In fact, this formulary has been thoroughly brought up to date. The book opens with 16 pages of useful data, including such useful parts of

information as incompatibles; poisons and their antidotes, and a full prolegical table. This book, as a whole, will be found to be a very useful and handy pocket remembrancer for the physician and will often suggest a remedy which has slipped his memory. The book is handsomely gotten up by the publishers.

Manual of Materia Medica and Pharmacy. Specially designed for the use of Practitioners and Medical, Pharmaceutical, Dental and Veterinary Students. By E. STANTON MUIR, Ph.G., V.M.D. 8vo.. pp. 192. Third Edition. Revised and Enlarged. [Philadelphia: F. A. Davis Company. 1904. Price, \$2.00 net.

This book has been quite a popular one with those students for whom it was intended, and its popularity has been attested by the number of editions through which it has gone. The author has not taken into consideration either pharmacology or therapeutics, but confines himself to materia medica and pharmacy. Despairing of finding a classification which will prove satisfactory to every one, he has simply arranged his subjects in alphabetical order. This book is divided into three parts. Part I. deals with General Considerations; Part II. contains a Consideration of Individual Drugs, and Part III. is devoted to Pharmacy. The author has made this a valuable book for students as well as a valuable one. It is one which any teacher may safely adopt as a text book, and the publisher has added to its usefulness by making it interleaved with blank pages for the introduction of whatever notes the student may deem useful.

Case Teaching in Surgery. By HERBERT L. BURRELL, M.D., and JOHN BAPST, M.D. 12mo. pp. 159. [Philadelphia: P. Blaxiston's Son & Co. 1904. Price, 75 cents.

As a little introduction this book should be adopted by all teachers of surgery. It contains the complete clinical histories and clinical examinations of 75 actual cases. These are printed on the left hand pages, the right hand pages being left blank for the student to fill in with his diagnosis, prognosis and treatment. This should prove a very popular method of teaching as it not only throws the student upon his own resources but furnishes a good index of how he has learned. Professors are furnished a key giving the correct diagnosis, treatment and prognosis, but it is not furnished to students. The authors have this matter in hand and they will, no doubt, see to it that it reaches the proper hands.

The book is gotten up in a handy shape and should prove popular.

Farmer Kilroy on the Evolution of Microbes, Monkeys and Great Men. By DR. SANDERSON CHRISTISON. 12mo. pp. 81. [Chicago: The Meng Publishing Co. 1904. Price, 25 cents.

This little skit of Dr. Christison breathes forth a spirit of gentle and yet, forceful satire aimed at many of the fads and follies of modern as well as past investigators into evolution. The criticisms made here and there, whilst apparently homely, are trenchant and lay the weak spots bare. This booklet is one which can be read in a quarter of an hour and furnish material for thought for many hours. It is amusing and can serve to while away some of the tedium of a doctor's otherwise busy life.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

Missouri Botanical Garden. Fifteenth Annual Report. 8vo. pp. 129. Plates, 45. [St. Louis: Published by the Board of Trustees. 1904.

A Manual of Fever Nursing. By Reynold Webb Wilcox, M.A., M.D., LL.D. 12mo. pp. 236. Illustrated. [Philadelphia: P. Blackiston's Son & Co. 1904. Price, \$1.00 net.

Farmer Kilroy on the Evolution of Microbes, Monkeys and Great Men. By Dr. Sanderson Christison. 12mo. pp. 81. [Chicago: The Meng Publishing Co. 1904. Price, 25 cents.

Case Teaching in Surgery. By Herbert L. Burrell, M.D., and John Bapst Blake, M.D. 12mo. pp. 159. [Philadelphia: P. Blackiston's Son & Co. 1904. Price, 75 cents net.

The Medical News Pocket Formulary. By E. Quin Thornton, M.D. Long 18mo. pp. 287. New (Sixth) Edition. [Philadelphia and New York: Lea Brothers & Co. 1904. Leather, wallet shape for the pocket, price, \$1.50 net.

A Practical Treatise on Medical Diagnosis. For Students and Physicians. By John H. Musser, M.D. Fifth Edition. Revised and enlarged. 8vo. pp. 1213. Illustrated with 395 Woodcuts and 63 Colored Plates. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, cloth, \$6.50; leather, \$7.50; half morocco, \$8.00 net.

Manual of Materia Medica and Pharmacy. Specially Designed for the Use of Practitioners and Medical, Pharmaceutical, Dental and Veterinary Students. By E. Stanton Muir, Ph.G., V.M.D. 8vo. pp. 192. Third Edition. Revised and Enlarged. [Philadelphia: F. A. Davis Company. 1904. Price, \$2.00 net.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the world. Edited by A. O. J. Kelly, A.M., M.D., Wm. Osler, M.D.; John H. Musser, M.D.; John Stewart, M.D.; John B. Murphy, M.D.; Thomas M. Rotch, M.D.; John G. Clark, M.D.; James J. Walsh, M.D.; J. W. Ballantyne, M.D., John Harold, M.D.; Edmund Landolt, M.D.; and Richard Kretz, M.D. With Regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad, Vol. I., Fourteenth Series. 1904. 8vo. pp. 304. [Philadelphia: J. B. Lippincott Co. 1904. Price per volume: cloth, \$2.00; half-leather, \$2.50. Each series consists of four volumes.

Literary Note.—We have learned from Messrs. P. Blackiston's Son & Co., of Philadelphia, that in printing all the copies of Deaver's Surgical Anatomy so far demanded by its most successful sale, there will have been used 2,340 pounds of ink, 188,002 pounds or 64 tons of paper, and the printing will have made 3,455,000 impressions.

On and after July 1, 1904, the price of this work will be advanced to \$30.00 in half morocco, and \$33.00 in half Russia binding. This is certainly but a slight advance when the value of the work is taken into consideration.

"It Was Summertime in Dixie Land."—This is at present the biggest "Song Hit" in this country, was written by Edwin Kendall, and is being sung nightly in all the principal Theatres in this country from Maine to California. This song has made such a tremendous "hit" in New York, Boston, Philadelphia, Chicago and San Francisco, that the publishers predict a sale of over one million copies during 1904. Upon receipt of 25 cents in postage stamps, a copy of this beautiful song will be mailed to any address in the United States by the Theatrical Music Supply Company, No. 46 West 28th street, New York.

MELANGE.

Notable Changes and Additions in the Faculty of the New York School of Clinical Medicine.—At a meeting of the Medical Board of the New York School of Clinical Medicine, held April 9, Dr. J. L. Adams was elected Secretary of the School and professorial and other distinctions were conferred upon the following, in the departments specified: Mental Diseases—Prof. E. C. Dent, Superintendent Manhattan State Hospital West, Ward's Island. Internal Medicine—Prof. Wm. Brewster Clark, M.D. Gastro-Intestinal Diseases—Prof. Robert Coleman Kemp, M.D. Assoc.-Prof. Gragam Rogers, M.D. Hydro-Therapeutics—Prof. Alfred W. Gardner, M.D. Ophthalmology and Otology—Prof. Geo. Ash Taylor, M.D. Clinical Instructor and Assistant William E. West, M.D. Genito - Urinary Diseases—Chief of Clinic and Assoc.-Prof. C. Stern, M.D. Dermatology—Cheif of Clinic and Instructor L. D. Weiss, M.D.

Tri-State Medical Society.—The Tri-State Medical Society of Iowa, Illinois and Missouri will meet in the city of St. Louis June 15, 16 and 17, at the Louisiana building, Vandeventer avenue and Morgan street. The preliminary program is as follows: Surgical Section—Oration on Surgery, Dr. Arthur Dean Bevin, Chicago, Ill.; Cesarian Section, Dr. T. J. Maxwell, Keokuk, Ia.; Notes on Urethrotomy, Dr. G. Frank Lydston, Chicago, Ill.; Surgery of the Prostate, Dr. J. B. Murphy, Chicago, Ill.; Surgery of the Kidney, Dr. F. Reder, St. Louis, Mo.; Operative Treatment of Nephritis, Dr. Franklin Martin, Chicago, Ill.; Report of a Case of Posterior Pudendal Hernia, Dr. J. F. Tainter, St. Charles, Mo.; Treatment of Mastoiditis by the General Practitioner, Dr. Henry Jurgens, Edina, Mo.; Clinical Experience in the Surgery of Carcinoma of the Cecum, Dr. G. Wiley Broome, St. Louis, Mo.; Appendicitis: when is an operation indicated? Dr. F. B. Dorsey, Keokuk, Ia.; The Management of Graver Forms of Appendicitis, Dr. D. W. Basham, Wichita, Kan.; Breast Tumors of Young and Old Women, Dr. Spitzley, Detroit; Synchronous Intra and Extra-Uterine Pregnancy, Dr. D. C. Brockham, Ottumwa, Ia.; Experimental Research on Retro-deviation of the Uterus, Dr. Emil Ries, Chicago, Ill.; Trans-

Pleural Laparotomy; Dr. W. E. Schroeder, Chicago, Ill.; Surgical Report of Some Stomach Cases, Dr. John C. Oliver, Cincinnati, Ohio; Plastic Surgery, Dr. C. E. Ruth, Keokuk, Ia.; Massage, a Distinct Surgical Adjunct, Dr. J. T. White, Freeport, Ill.; The Rise of Anatomy and Surgery, with Lantern Slide Demonstration, Dr. James Moores Ball, St. Louis, Mo.; Glioma of the Retina, with Lantern Slide Demonstration, Dr. W. F. Fischer, St. Louis, Mo.; Some Cases of Kidney Surgery, Dr. J. W. Smith, St. Louis, Mo.; New Methods of Dressing Fractures, Dr. H. P. Wells, St. Louis, Mo.; Bilateral Extra-Uterine Pregnancy, Dr. R. E. Wilson, St. Louis, Mo.

Medical Section—Oration on Medicine, Dr. R. B. Preble, Chicago, Ill.; The Female Breast, Its Anatomical and Its Functions Independent of Lactation, Dr. Thomas Manley, New York, N. Y.; The Differential Diagnosis between Syphilitic Pseudo-Membranous Angina and Diphtheritic Angina, Dr. R. R. Campbell, Chicago, Ill.; Syphilitic Gummata as Seen by the General Practitioner, Dr. B. S. Pennington, Mediapolis, Ia.; The Chronological Sequence of Symptoms and their Ensemble as a Factor of Diagnosis in Cutaneous Syphilis, Dr. E. A. Fischkin, Chicago, Ill.; Malformations Through Inheritance, Dr. J. Laughlin, Ledyard, Ia.; Some Cases of Feigned Eruption, Demonstration with Lantern Slides, Dr. Heidingsfeld, Cincinnati, Ohio; Pathologic Considerations Relative to the Bile Passages, with Lantern Slide Demonstration, Dr. Horace W. Whitacre, Cincinnati, Ohio; Atonic Dilatation of the Stomach, Dr. Fenton B. Turck, Chicago, Ill.; Ocular Lesions in Scarlatina, Dr. E. O. Sisson, Keokuk, Ia.; Tuberculosis and its Treatment—some new ideas—with report of a case treated and cured, Dr. J. E. Hainline, Chicago, Ill.; Radio-Activity, Dr. J. C. Sullivan, Cairo, Ill.; The Uses of the Lesser Nervines, Dr. W. F. Waugh, Chicago, Ill.; Sanitation and Hygiene of Life, Dr. Geo. P. Neal, Fort Madison, Ia. Report of Cases, Dr. Charles J. Orr, St. Louis, Mo.; Radium and Light (Demonstration), Dr. H. Robarts, St. Louis, Mo.; Broncho-Pneumonia in Children, Dr. H. G. Nicks, St. Louis, Mo.; Biett's Collarette and the Satellite Syphilide, Dr. A. H. Ohmann-Dumesnil, St. Louis, Mo.

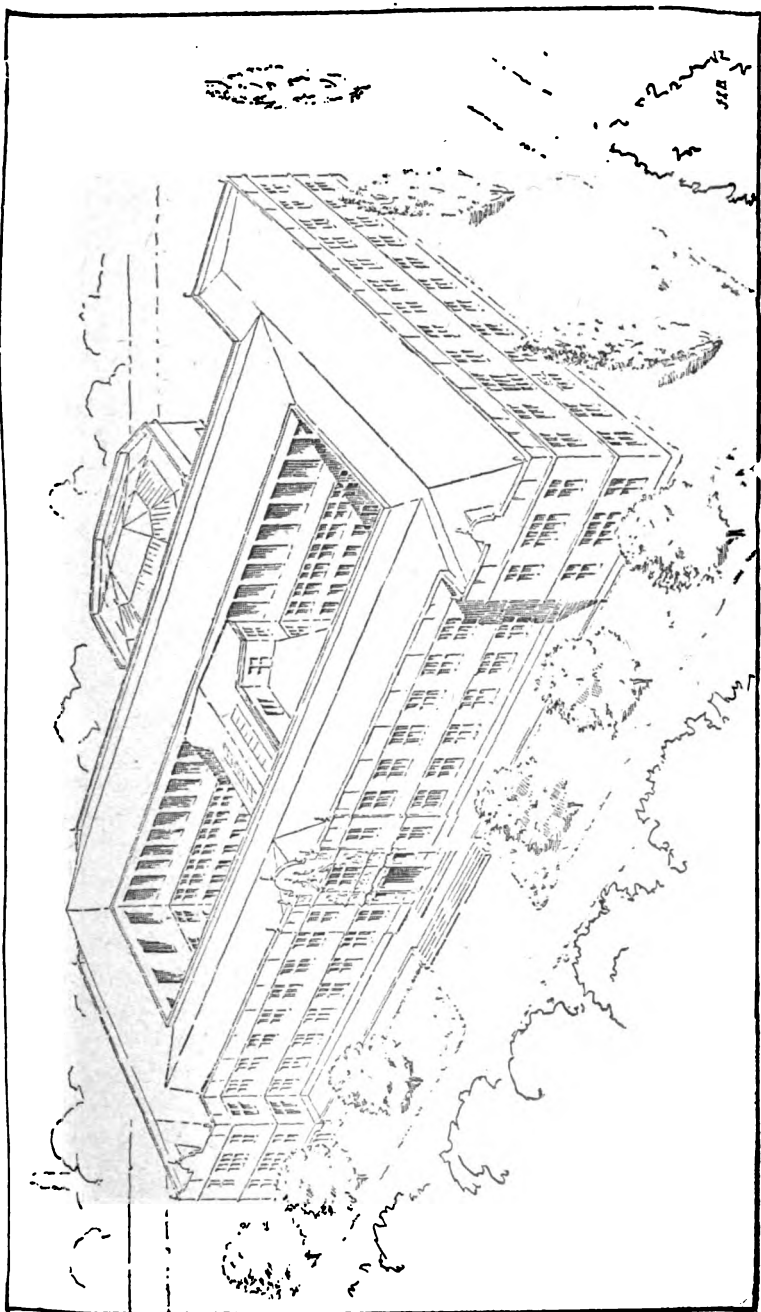
June is the ideal time for meeting in St. Louis. The weather will be delightful. The great Exposition will be in

full swing. "The Pike" will be in its most dazzling phase—fresh with all the ethnological (as well as pathological) attractions of the four quarters of the globe—and each costing about four quarters to see. The sessions will be held from 8:30 A.M. to 1 P.M., leaving afternoons for the Fair and evenings for the Pike. On June 16, however, three sessions will be held. Hence, the meeting ought to be a record-breaker in point of attendance.

New Era in Medical Teaching.—University of Pennsylvania About to Dedicate Most Complete Medical Laboratory in America.—The last quarter of the Nineteenth Century witnessed the conversion of the teaching and practice of medicine from a theoretical to a practical and demonstrative basis. This momentous change has been the result of the establishment of laboratories in which research in medical science might be conducted. By means of the facilities offered in these laboratories, workers have not only enormously increased our knowledge of the structure and functions of the human body and of the nature of disease, but have provided methods which have already robbed some of the most direful pestilences of their chief terrors.

In view of these contingencies the University of Pennsylvania has constructed a new medical laboratory which will be formally dedicated on June 10th, 1904. In completeness and equipment this new building is without rival. It provides for the teaching of students and the carrying on of research work on Physiology, Pathology and Pharmacology, in which departments of medicine the greatest advances have been made in the past and may be predicted for the future.

The opening of these laboratories is not simply of local but of national interest. About four years have been occupied in the construction of the building, which exclusive of its ground and equipment has cost in the neighborhood of \$700,000. The erection of a new medical hall, an anatomical building, auxiliary buildings, which will adjoin the building about to be dedicated, is also contemplated in the near future. These with the present hospitals and clinical laboratories will form one of the most extensive systems of buildings devoted to the teaching of medicine in Europe or America.



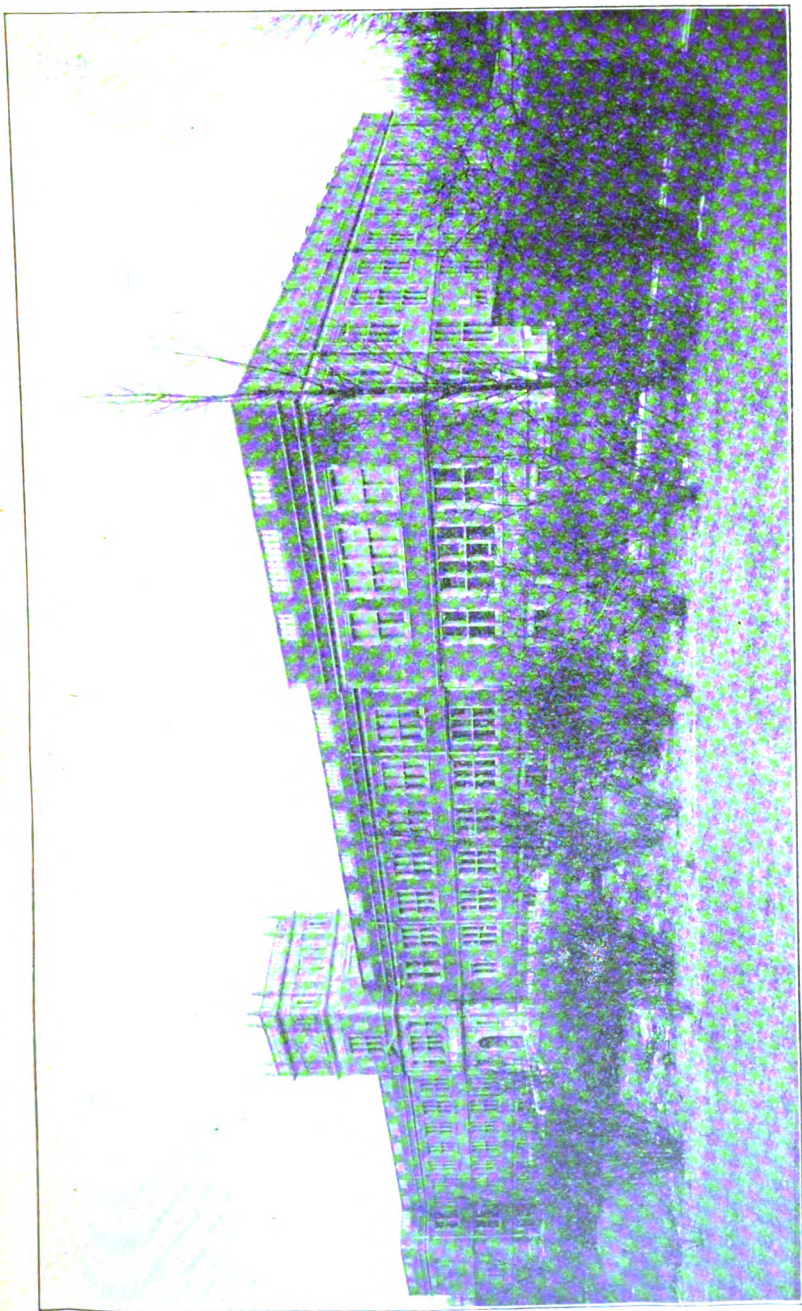
BIRD'S EYE VIEW, NEW MEDICAL LABORATORY BUILDING.

The new building is quadrangular in shape and is located on the south side of the Hamilton Walk, between Thirty-sixth and Thirty-seventh Streets, on the site of the old Veterinary Hall and Hospital. The building is two stories in height above a high basement and measures 337 feet front by nearly 200 feet in depth. The long front faces north, securing a maximum amount of the best light for laboratory purposes. All along the front are arranged small rooms for research, professors, assistants, etc. These open into a private corridor, so that those employed in these rooms may pursue their work without interruption from those passing through the main halls.

Perfect lighting of all the laboratories has been obtained, the courts being large enough, with the low front building, to furnish good north light to the Laboratory of Pharmacy and Pharmacodynamics on the first floor, and to the large laboratories on the second floor devoted to Pathology, where microscopic work is to be done.

The first floor of the new laboratories is to be devoted to Physiology and Pharmacodynamics. The basement rooms are also well lighted. Here will be located locker, recreation and toilet rooms for the students, janitor's quarters, rooms for practical instruction in physical diagnosis and bandaging, rooms for sub-section teaching in physiology, store rooms, research rooms, etc.

The department of physiology on the first floor will have provided one large room in which there will be ninety cabinets fully equipped with such apparatus as is required in the practical exercises in physiology carried on by the students. Three rooms have been especially constructed and equipped for aseptic operations on the lower animals, one of them being a preparation room for the operator, another one of them being a preparation room for the animals, and another for operating. A well equipped shop has been provided for the construction and repair of apparatus. In the east wing are a number of rooms for sub-section teaching, etc., in special departments in physiology, digestion, circulation, respiration, calorimetry, nerve-muscle, special senses, etc., respectively. There has also been provided a photographic dark room, and an adjoining room for projection and other optic apparatus, the importance



NEW MEDICAL LABORATORY BUILDING.

of which in the making of diagrams, charts, lantern slides will be apparent. The department of pharmacology has also been provided for on the first floor.

The second floor will be devoted exclusively to pathology, with temporary accommodations for a number of the professors of other departments, until the completion of future building operations looking to the final transfer of the entire medical school to buildings adjacent to the present new building. The east wing accommodates the laboratory of advanced pathological histology and a seminar and journal room; the west wing is occupied by the pathological museum, the gross morbid anatomy demonstration room, a room for museum preparation, photographic rooms and rooms for animal operations. The museum and gross morbid anatomy demonstration rooms are in close proximity to the large class laboratory of pathological histology in the west end of the southern part of the building for the obvious purposes of closely relating the instruction carried on in each. This last laboratory, that of pathological histology, the front of which consists almost entirely of glass, is located so as to face a spacious court to the north, thus insuring excellent and uniform light and admirably adapting it for microscopic work carried on by a large class. In a similar section of the building, east of the central hall, with similar front arrangements to insure light for microscopic work, are located two smaller laboratories to be employed in the teaching of surgical pathology, neuropathology and clinical pathological technology; and private rooms for the instructors of these branches are arranged to open upon these larger laboratories.

The architecture is distinctly "Pennsylvanian" and conforms to that of the dormitory system, the new law school building, gymnasium, engineering hall, and the stadium of the University. It forms at present one of the most imposing sights in Philadelphia.

MISCELLANEOUS NOTES.

Blood Impoverishment.—In meeting that condition of the system embraced in the above headline, is it not true that our first thought, and that to which our instinct naturally leads us, is iron : but viewed from the standpoint of now accepted scientific facts, is this not looking at but one phase of the question? That there is a deficiency of iron in the blood in most forms of anemia is, of course, indisputable ; and to endeavor to supply this lack by the administration of iron seems but a common sense procedure. This practice would be sufficient if anemia were, in reality, nothing more than a condition of iron deficiency ; but modern physicians know that the real underlying causative factor is a disturbance of the complicated processes of nutrition and metabolism, and that iron poverty is but one manifestation of this disorder. Sufficient proof of this fact has been presented to every physician when he has observed how anemic conditions persist in spite of the long continued administration of iron. Here, then, iron must be supplemented by such remedies as have the ability to awaken the depressed nutritive and metabolic processes. To invigorate, to rekindle nervous force, to revitalize all functions, and thereby bring about a condition of systemic vigor, of which blood-enrichment is necessarily a feature, the addition of Manganese with Iron is desirable. In Pepto-Mangan, Iron and Manganese was first brought to the attention of the profession by Dr. Gude, chemist, and this preparation is found to be one of the best therapeutic resources of the present-day physician, and when combined with such other remedies as meet the indication, such as we have spoken of, forms at once a therapeutic arsenal whose fortress is impregnable.—Editorial in *Medical Summary*, March, 1904.

Sanmetto in Genito-Urinary Diseases.—I have prescribed Sanmetto with much satisfaction in diseases of the genito-urinary organs, with marked effect in prostatic troubles of old men, and in different kinds of urethral inflammation, even in gonorrhea. It is certainly an excellent vitalizing tonic to the reproductive system. I am using original packages, except very rarely in smaller quantity, and then I am absolutely sure that no substitution is practiced, as I see to it with my own eyes, if necessary, that the genuine article is gotten by my patients. The subject of substitution, so largely practiced, is one of pre-eminent importance, and needs to be watched by all physicians, with both eyes.

Russell, Kans.

JOSEPH W. ROBB, M.D.

The Pain in Rheumatic Gout.—Chas. P. Heil M.D., late Professor of Anatomy, Indiana College of Medicine, Indianapolis, Ind., in the *Mobile Medical and Surgical Journal*, states: "Many of the cases of rheumatic gout which I have treated were of an obstinate and complicated character, and I must state that I myself have been suffering with an attack in the nature of a very severe inflammatory condition, situated in and over the articulations of my wrist, knee and ankle joints. The pain which I suffered most of the time was indescribable. I placed myself under the care of a physician, who, upon examination, pronounced me also slightly affected with cardiac trouble. I suffered the most excruciating pain for ten days and nights, without alleviation of my sufferings, nor apparent signs of progress for the better. Knowing full well the efficiency and value of Antikamnia Tablets in these cases, I took two tablets, and about ten minutes after taking them the pain was relieved, I perspired slightly and then fell into a gentle sleep. The result was simply magical. I slept eight hours in perfect rest, free from all pain. I continued the two tablets every four hours during my convalescence and until complete recovery."

Superior to the Opiates.—Nervousness, from whatever cause it may arise, is easily controlled with Daniel's Concentrated Tincture Passiflora Incarnata. Passiflora is distilled from the May-pop, which contains, of all fruits, the highest property of inducing natural sleep. Its advantage over the opiates is that it strengthens and up-builds, instead of wasting and tearing-down. This is the most estimable quality in a sedative, and one for which the practitioner has a daily need. In all nerve diseases its advantage is readily appreciated, because the patient must not only have sound slumber, but should awake refreshed, and without the desire for another dose of medicine to revive from the after-effects of that already taken. This office is performed by Daniel's Passiflora, because it leaves the nerves relaxed, and in a healthful condition.

Kennedy's Dark Pinus Canadensis as a Mucus Astringent.—When an internal mucus astringent is indicated, in such cases as cholera infantum, etc., Kennedy's Dark Pinus Canadensis should be given in an alkaline medium.

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A. H. OHMANN-DUMESNIL, A.M., M.D.
EDITOR AND PROPRIETOR.

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ORIGINAL COMMUNICATIONS.

MASSAGE OF THE HEART FROM CHLOROFORM COLLAPSE.*

BY W. W. KEEN, M.D., LL.D., F.R.C.S. (HON.), PHILADELPHIA, PA.

A fatal result during an operation is so rare that such cases should be reported, together with the means employed for resuscitation of the patient, especially when the means are novel. On only three occasions in my entire professional life have I been so unfortunate as to have a patient die on the table. The first two were respectively cases of operation on the brain and goiter. In both of these cases hemorrhage was the cause of death, and all the usual means were unavailing.

The third case of death on the table and the first case of massage of the heart here reported is of more than usual interest, not only on account of the method employed for resuscitation, though unfortunately it was unavailing, but because of the prior fracture of the skull, with entire recovery from mental as well as physical symptoms.

The notes of the second case have been kindly sent me by Dr. Kristian Igelsrud, of Tromsö, Norway. He was present when I operated upon the first case, and as I was greatly interested in the account of his own case, I requested him to let me have the notes for publication, which he has kindly done.

CASE I (KEEN).—*Fracture of the skull followed by aphasia and partial loss of word memory; trephining; restoration of speech; recurrent hoarseness; development of squamous epithelioma of both vocal cords; unilateral laryngectomy; recovery; total laryngectomy; death from chloroform collapse; ineffectual attempt to restore life by massage of the heart.*

The patient, John H., was first seen December 13, 1902, at the instance of Dr. Charles E. McGirk, of Phillipsburg, Pa., and

* Read before the Philadelphia County Medical Society, March 23, 1904.

Drs. B. Alex. Randall and Walter J. Freeman, of this city. These gentlemen furnished me with the following facts: Prior to the accident about to be described he had always enjoyed good health, and had never suffered from hoarseness or any trouble with speech. In 1900, about two years before I saw him, he was struck on the left side of the head by a piece of paving brick thrown by accident, causing a fracture of the skull. Dr. McGirk writes me that his father, Dr. J. D. McGirk, saw him twenty minutes after the accident, found him partially conscious, but unable to speak, and made the remark that he was drunk. The patient, however, by signs conveyed to Dr. McGirk that he wanted paper and pencil, and upon this being furnished, he wrote that he was not drunk, but had been hit with a brick on the head. Dr. Charles E. McGirk saw him the next day, "when he could articulate words with great difficulty, and was suffering from motor aphasia and partial loss of word memory. He was unable to say many words, especially those beginning with 'b,' even after repeated trials. He would be talking and stop in the middle of a sentence, unable to proceed for some seconds on account of his inability to speak the remaining words, but knowing perfectly what he wished to say. Finally memory returned to him and he would complete the sentence. Along with this disturbance of speech slight hoarseness appeared, but about two months after the accident the hoarseness disappeared while the aphasia still remained." Dr. McGirk believes that the temporary hoarseness immediately after the accident was due to partial paralysis of the vocal cord, and that this may have had some influence in the later carcinomatous development.

"Some time prior to September, 1902, probably in June or July, hoarseness reappeared, and from this time the hoarseness became gradually worse, though it never caused him any dyspnea."

In September, 1902, the patient again consulted Dr. Chas. E. McGirk, who found a marked depression at the site of the old injury, and on October 3, 1902, trephined and removed the depressed bone. Dr. McGirk reports that "the depression extended from before backward and was about $1\frac{1}{2}$ inches in length, the deepest depression being about its middle, and extended over the lower portion of the anterior and posterior

central convolutions. The inner surface shows the groove for the middle meningeal artery and also the fractured inner table. The external surface shows a very marked depression of the skull. He was anesthetized with ether and oxygen. He took the anesthetic with great difficulty, and was cyanotic to a greater or less degree during the entire operation." He made an uneventful convalescence; word memory returned in two weeks, but his hoarseness remained, as well as soreness, which had become worse within the prior four or five weeks. Finding that the throat condition was growing worse, with marked dyspnea, Dr. McGirk had him consult Dr. Randall December 4, 1902, and Dr. Randall asked Dr. Freeman to see him. They examined the larynx carefully and determined that "the rough, enlarged left vocal cord extended beyond the middle line and presented outgrowths, which are almost certainly epitheliomatous. There is little evidence of glandular involvement" (Randall). It was impossible to see the anterior portion of the right cord. They advised an operation—a unilateral laryngectomy if this would seem to promise relief, or total laryngectomy should the operation show its necessity.

Dyspnea was a very prominent symptom, and was so great that, as Dr. Randall pointed out, if exposure to the weather or any other case should produce any slight increase in the obstruction to breathing, an instant tracheotomy would have to be done. This would be extremely difficult. The man weighed nearly 200 pounds, his neck was short and thick and the trachea, of course, was very deeply situated.

First operation, unilateral laryngectomy, December 16, 1902. Drs. McGirk, Randall and Freeman were kindly present. Drs. Stewart and Craig assisted me at the operation, and Dr. Spencer gave the anesthetic. In view of Dr. McGirk's experience with the anesthetic at the former operation and of the existing excessive dyspnea, I feared that a general anesthetic would cause such sudden increase of dyspnea from spasm that instantaneous tracheotomy would be necessary. I decided, therefore, to operate under local anesthesia until I could split the thyroid, and by opening it widely determine whether unilateral or complete laryngectomy would have to be done. This plan was carried out, the patient being in the Trendelenburg position. He suffered but little pain, but as soon as the larynx

was widely open began to cough so constantly and violently that it was very difficult to make any accurate observation. Finally, however, we were able to ascertain clearly that the entire left vocal cord was diseased, and that a very small part of the anterior end of the right vocal cord undoubtedly was thickened, and I suspected a beginning disease there. On consultation, however, we deemed that unilateral laryngectomy, together with the removal of the anterior end of the right cord, would be a sufficiently radical operation. Accordingly, I removed, first, the anterior portion of the right cord without trouble. On attempting to separate the soft parts on the left side of the larynx from the thyroid cartilage, he felt so much pain in spite of the local anesthesia that I decided to give him some chloroform. This was done by means of the von Esmarch mask over the mouth and nose, with an additional piece of gauze over the laryngeal opening. He struggled a great deal. It was impossible to get him quieted with the chloroform sufficiently to go on with the operation without producing such cyanosis as to render Dr. Spencer and myself very anxious. The partial laryngectomy, however, was finally effected under very great difficulties; part of the time he was struggling, and part of the time, though quiet, he was cyanotic. I then placed a tracheotomy tube above the cricoid and closed the wound. He made a perfectly smooth and good recovery in spite of the fact that the wound necessarily communicated with the fluids of the mouth. Prior to the operation, and also during convalescence, the mouth, nose and laryngeal wound had been sprayed with hot listerine and boric acid every two hours while he was awake. His temperature only rose above 99° for two days, the fourth and fifth, and it reached 99.8° on one occasion only. The tracheotomy tube was removed on the fifth day, and he went home on the seventh day after the operation, the wound being almost healed.

Prof. Coplin, to whom the specimens were given for examination, pronounced the disease a squamous epithelioma not only of the left cord, but also beginning to involve the right cord. Naturally, therefore, I looked forward with a great deal of anxiety to his future.

About January 20, 1903, his dyspnea returned and rapidly increased. On the afternoon of February 4 he returned to the

city, his dyspnea being so great that his wife was afraid he would die on the train. He was able, however, to wait until February 6, the earliest date at which it was possible for me to do the operation.

Second operation, total laryngectomy, February 6. Anticipating the possibility of an instantaneous tracheotomy, chloroform and oxygen were given him, but not until he was upon the operating table. He was then placed in the Trendelenburg position, and I did a very low tracheotomy, but with a great deal of difficulty, because again, as before, when a moderate amount of chloroform was given he struggled, and when enough was given to keep him quiet he became so cyanosed as to make me very anxious even for his life. As soon as the tracheotomy was done, chloroform was given through a tube which was connected with a long rubber tube and the inhaler (Trendelenburg's apparatus). The larynx was then dissected out, the trachea divided at the first ring below the cricoid, and the entire remaining portion of the laryngeal box was removed. The hemorrhage gave a considerable amount of trouble, but was finally checked. I then sewed the anterior wall of the pharynx to the tissues around the hyoid bone and the upper end of the trachea to the skin. Just as I finished suturing the parts and was ready to close the wound, his pulse suddenly failed and his face became very blue. The operation and the administration of the chloroform were immediately stopped, pure oxygen was administered, 1-20 of a grain of strychnin was given hypodermically, artificial respiration was instituted with rhythmical traction upon the tongue (although I doubted whether, in the absence of the larynx, this would be of any value), the battery was applied over the phrenic. In spite of all this his heart continued to beat much faster and weaker, he became more cyanotic, and in two or three minutes the heart ceased beating and he was dead. After continuing the above means as nearly as I could judge for ten minutes, as a last resort I opened the upper abdomen, introduced my hand into the abdominal cavity, and between this hand and the right hand, which made counter-pressure on the anterior wall of the chest, I masséd the heart. These efforts were continued for nearly one-half an hour, but without avail.

Examination of the specimen by Prof. Coplin and Dr. A. G. Ellis confirmed the diagnosis of epithelioma.

CASE II (IGELSRUD).—*Abdominal hysterectomy; chloroform collapse; massage of the heart; recovery.* Dr. Igelsrud calls attention to the fact that the case is not entirely convincing, for the ordinary means of resuscitation were only tried for three to four minutes, and also traction on the tongue was employed during massage of the heart. He states, however, his personal belief that the massage of the heart was the most effectual of all the means employed. (He has not given me the date of the operation, but it was prior to 1902, probably in 1901.)

"A thin, lean, rather cachectic woman, aged 43 years, with carcinoma of the uterus. Total abdominal hysterectomy was performed. When the operation was almost finished the patient passed into collapse; artificial respiration, lowering of the upper portion of the bed, faradization, and the other usual means were used for about three to four minutes. The heart was then laid bare by a resection of parts of the fourth and fifth ribs. The pericardium was opened and the heart seized between the thumb and fore and middle fingers on the anterior and posterior surfaces. Quite strong and rhythmical pressure was made for about one minute, when the heart began to pulsate of itself. Then observing that the pulsations were becoming weaker, massage of the heart was practiced for about one minute more. From that time the pulse was preceptible and the contractions of the heart became regular. Of course the estimate of time of the various stages is only approximate, as accurate observation of a timepiece is impossible under such circumstances. The patient was discharged from the hospital after five weeks."

The physiologists led the way in efforts to re-establish the pulsation of the heart, Schiff in 1874 being the first to succeed by means of rhythmical compression of the ventricles by the hand. At first defibrinated blood was injected, but later various artificial fluids more or less resembling blood in their dissolved salts and specific gravity have given even better results. Finally the addition of 1 per cent. of grapesugar to Locke's fluid was found to be the most desirable means.

The earlier experiments were made upon the heart retained in the body, but later hearts removed from the body even for a long time and even after being frozen were more or less successfully resuscitated. Not only was the effect of filling the

heart with fluid tried, but direct massage of that organ was used.

In 1889 Prus, of Lemberg (*Wiener klin. Wochenschrift*, 1900, Nos. 20 and 21), made a new series of experiments upon dogs. He experimented upon forty-four dogs killed by asphyxia, twenty-one by chloroform and thirty-five by electricity. His attempts to resuscitate them were sometimes begun as late as an hour after the heart had ceased to contract. He then seized the heart laid bare *in situ* with the right hand, the thumb being applied on the right ventricle and the other fingers on the left ventricle, when he instituted rhythmical movements. Out of the 100 experiments he was successful in re-establishing contractions of the heart forty-seven times in a wholly normal manner after efforts varying from fifteen seconds to two hours, and eight times incompletely.

In 1900 Batelli (*Jour. de Physiol. et de Path. Gen.*, 1900, p. 443) made further studies in the same direction. He was able to recall to life several dogs. Both he and Prus advocated the application of the method to man in case of cardiac arrest from chloroform asphyxia.

Kuliabko (*Arch. Gesamte Physiol*, 1902, vol. xc, p. 461) established artificial circulation in a rabbit's heart which had been removed from the body. It was kept at a temperature of 40° C. and showed regular contractions. After an hour it was placed in an ice-chest for eighteen hours, when the experiment was repeated, and after less than half a minute the heart recommenced its rhythmical contractions around the openings of the vena cava. In half an hour fairly strong but rhythmical contractions of the right ventricle were observed, but none of the left. In four and a half hours the pulsations ceased. In another case, after the heart had been kept twenty-four hours in ice, contractions were re-established, and in another case after forty-four hours pulsations continued over three hours.

Kuliabko (*Centralblatt fuer Physiologie*, 1902, vol. xvi, p. 330) also reports that instead of the hearts from healthy animals which had been killed, he took the hearts from rabbits that had died, and even on the second, third and fourth day after death, after a longer or shorter circulation of Locke's fluid, the isolated heart was made to pulsate again and continued to pulsate for several hours. In August, 1902, he tried

the same experiment on the heart of a boy three months old who had died from double pneumonia. Twenty hours after death the heart was removed from the body and Locke's fluid was used. For a long time the heart remained still, but finally after about twenty minutes feeble, long, rhythmical contractions of the auricle began, which later extended to the ventricle, and finally the entire heart began to pulsate and continued to do so for over an hour. Later he says that in a number of instances in the human heart as long as thirty hours after death pulsations were produced.

Velich (*Munch. med. Woch.*, August 19, 1903, p. 1421) also placed a heart removed from a dog's body in snow for six hours, and was able to re-establish contractions both in the auricle and ventricle. Again in a heart lying in snow for eighteen hours, and again after being frozen in salt solution for twenty-four hours, contractions of the auricle and even slight contractions of the ventricles were re-established.

Spina, of Prag, according to Velich's very interesting article, proposed a new and apparently less dangerous method, which so far as I know had not been adopted in man. Up to this time most of the attempts had been made by mechanical methods to start contractions of the heart together with various devices for the purpose of filling it. Spina injected into an artery (not a vein), in the direction toward the heart, a considerable quantity of normal salt solution (200 cubic centimeters in a dog) at 35° to 40° C. Just before it reaches the cavity of the heart the fluid closes the aortic valves and finds its way into the coronary arteries, thus stimulating the heart muscle itself. In this way Spina and his pupils in many researches were able almost regularly to revive the action of the heart, both in animals in which the brain and cord had been destroyed and also in animals in which the heart's action had been arrested by poisoning with alcohol or other poisons. In one instance of a dog poisoned with nicotin he states that ten minutes after the heart had remained quiet artificial respiration was begun, and 200 cubic centimeters of normal salt solution with one per cent. of grape-sugar were injected into the femoral artery in the direction of the heart. Even during the injection pulsations of the heart began. These became stronger, until the circulation was re-established as in a normal animal.

As early as 1896 Velich, and in 1899 Gottlieb and Cleghorn, made experiments with adrenalin.

The latest experimenter in this direction is Crile, of Cleveland, in whose admirable study of "*Blood-pressure in Surgery*," just published, the results are fully given. He rightly calls attention to the fact that *we cannot expect to restore the apparently dead to life by resuscitation of the heart alone*. Not only must the heart be made to beat, but the respiration must be re-established and the vasomotor center must be stimulated into renewed activity. To massage of the heart, therefore, we must add artificial respiration and to both of these the means to restore vasomotor activity. These means he has shown by experiment to be infusion of adrenalin in salt solution and the pneumatic rubber suit. By the above means, without the rubber suit, he has repeatedly resuscitated animals whose heart had entirely ceased to beat for fifteen minutes. The pneumatic rubber suit can be inflated at will, and thus the blood pressure be maintained at any given level. He relates several instances in which its use in man during operations seemed to be of great value. The most striking is that of a man with a severe depressed fracture of the skull whose heart had ceased to beat for nine minutes. The heart was restored to rhythmical action with a full radial pulse for thirty-one minutes, and while the bone was being elevated he made voluntary movements of the head. I have had no experience with the pneumatic suit, but through the kindness of Dr. Crile, I show one to you.

As nearly as can be judged, after a résumé of all the cases in which massage of the heart has been employed which I found recorded in surgical literature (for some of the cases are rather vaguely referred to), massage of the heart has been attempted in twenty-seven cases. Of these twenty-four have been failures, and in three (Cases 16, 24 and 27) restoration has followed—a very meagre showing so far, but not a surprising number of failures when the gravity of the condition is considered. In fact the surprising thing is rather that any of them recovered. How far the other means used have been instrumental in recalling them to life—whether these alone would have been sufficient, whether the massage of the heart was essential to their restoration of life—it is difficult, if not impossible, to state with certainty. Moreover, in a few cases success seem^s

to have been so nearly achieved that but little more would have been necessary to turn the balance.

Of one thing I feel assured, that Crile's position is correct when he says that surgeons as well as physiologists so far have fixed their attention too exclusively upon restoring merely the pulsations of the heart. This alone will not re-establish life. The vasomotor and the respiratory centers must be awakened into rhythmical action as well as the blood be started on its vital round before we can hope to recall the apparently—or shall we say really?—dead to life. To accomplish this, massage of the heart, artificial respiration, the infusion of adrenalin in salt solution, and I think very possibly Crile's ingenious pneumatic rubber suit, will all aid.

The methods by which the heart has been made accessible for massage are threefold: (1) By compression between the hands, one being applied outside the chest and the other directly upon the heart after an abdominal section, but without opening the diaphragm. (2) By abdominal section, and after opening the diaphragm seizing the heart within the pericardial sac. (3) By resection of the chest wall, incision of the pericardium, and grasping the heart with one or both hands.

If abdominal section has already been done, the first or second method will usually be adopted, so as to avoid delay and the additional traumatism caused by opening the chest wall. If the operation which is being done does not involve an abdominal section, then an independent quick section is to be made in order to get access to the heart.

Of the successful cases, one of them, Starling and Lane's, (No. 16) was done by this method. In my own case also I practiced the same method, but I must confess that I do not think as a result of this one experience that the heart is so easily seized and manipulated as by either the second or the third method.

In the second method, either a definite incision can be made through the diaphragm to the left of the middle line and posterior to the border of the ribs or, as in Poirier's case, the finger may be thrust through the diaphragm and the aperture enlarged simply by tearing.

The third method, exposure of the heart by resection of the

chest wall, was used successfully in Igelsrud's case although the abdomen was already open. The more usual method of gaining access to the heart is by resection of the third, fourth and fifth ribs. In this particular case I made the incision run parallel to the third and fifth ribs, joining them by a vertical incision along the left border of the sternum. The base or hinge of the flap is external. Different authors have preferred to make the base or hinge above, toward the median line, or below, and to make the flap rectangular or U-shaped. The great advantage of this incision is that the division of the bones can be made next the sternum through the cartilages of the ribs and that a stout pair of scissors enables us to divide the ribs at other points. These instruments would always be in readiness.

The incision proposed by Wehr (*Centralblatt f. Chirurgie*, 1899, Beilage, p. 74), only the fourth and fifth ribs are resected and the base of the flap is on the right border of the sternum. This requires a saw or chisel to divide the sternum. These instruments might very possibly not be provided for the operation in hand, and of course there would be no time to disinfect them if they were not ready.

In any case care must be taken, if possible, to detach the pleura and not open its cavity, as this necessarily complicates the injury very much by adding a pneumothorax and possible collapse of the lung to the already serious condition of the patient. The pericardium is then incised, the heart seized by the hand and rhythmical compression instituted.

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INFECTION IN THE UPPER ABDOMEN: PROBABLY AN ABSCESS OF THE LIVER OF AMEBIC ORIGIN.*

BY JOHN H. MUSSER, M.D., AND DE FOREST WILLARD, M.D.,
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MEDICAL ASPECT. While the broad features presented suggest that the case herewith reported is one of amebic abscess of the liver, the surgical findings and some of the subsequent investigations make me hesitate, so that I do not wish to go on record as calling this a case of that character. I should prefer, if Dr. Willard will agree with me, to call the case one of infection in the upper abdomen. Briefly, the features which suggest amebic abscess of the liver are as follows: A patient, fifty-five years of age, had been staying for the time at Atlantic City. She had been perfectly well throughout the summer. She suffered, August 24, after dietetic errors, from acute gastroenteritis. The gastritis subsided, but the enteritis continued. There was colitis, characterized by bloody and mucous discharges, and the usual general features, with continued, but not very high, temperature. I saw her about the fifteenth of September, about three weeks after the beginning of the attack, in what was practically called a relapse. At this time I noted nothing unusual, except that the abdomen was more distended, and particularly the upper abdomen was more tympanitic than in an ordinary case of colitis. The patient continued improving from this time, save that she had two or three attacks of faintness and vertigo, which alarmed the family, and they had her removed to Philadelphia under my care in the Presbyterian Hospital. She was admitted to the hospital on the twenty-

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sixth of September, without fever. I saw her on the twenty-seventh, and found that she had a tender mass in the upper abdomen continuous with the liver and extending about to the umbilicus in the median line, the shape of which conformed to that of the left lobe of the liver. There was apparently an infection present and, in view of the previous gastro-intestinal attack, I thought we had to do with abscess of the liver.

The stools of this declining attack were examined in accordance with the usual methods, and ameba-like bodies were found. They were not living and, therefore, I hesitate to say that the case was one of amebic dysentery. Large masses of protoplasm which were not leukocytes were found, but they were not living masses, possibly because of the declining stage of the disease.

The following day the patient was seen by me with Drs. Willard, Mayo and Ochsner. We all agreed that there was infection in the upper abdominal cavity and that operation was required because of the local conditions and because the patient showed signs of toxemia, if not of septicemia, characterized by rapid pulse, anemia, prostration, vertigo and nausea.

The fluid that was removed at the operation had a specific gravity of 1012; was chocolate-colored, was only slightly if at all purulent, having 4.4 per cent. of albumin. No pancreatic ferments were found. Microscopically a little blood, no pus, some fat, no bacteria. The fluid was sterile. Examination of the stools after operation or during convalescence showed no amebæ. Examinations of the clots removed at the operation were negative as to presence of amebæ. During the time the patient was under observation before operation in two days the leukocytes rose from 14,000 to 22,000, declining after operation. The temperature after operation rose to 101° for forty-eight hours; subsequently it fell to normal. There was no response at any time to agglutination tests with cultures of bacillus of Shiga or of Eberth.

There was one feature I want to call attention to, the occurrence of the vertigo and the attacks of moderate collapse, which I believe now were due to the fact that the heart was displaced upward, possibly by the large collection in the upper abdominal cavity. Recovery was without event.

The occurrence of an abscess in the liver, apparently, in a

patient with coexisting colitis, even in this climate, suggests an amebic origin. When with this we note an absence of fever the suspicion is confirmed, especially as ameba-like masses were found in the stools. The findings of the surgeon, not as definite as we might wish owing to the exigencies of the operation, the peculiar nature of the fluid removed and the old clots suggest strongly a pancreatic origin for the accumulation. Even the absence of pancreatic ferments does not contradict this, as it has been shown that this property is lost in old cases of pancreatic cyst.

SURGICAL ASPECT. The patient was first seen by me September 29, in consultation with Dr. Musser. The swelling appeared in the right side of the epigastrium on the previous day; the tumor was semifluctuating; tender upon pressure, with pain extending to the right over the whole area of the liver. The character of the pain was aching rather than intense suffering. Hemoglobin, 60 per cent.; erythrocytes, 2,745,000; leukocytes varying from 14,700 to 22,000.

On account of danger of rupture of the abscess into the peritoneal cavity, immediate operation was undertaken, Dr. Mayo kindly assisting. Upon opening the peritoneum it was found that no adhesions had yet taken place between the two layers; consequently, careful circumferential packing was introduced. Examination of both lobes of the liver failed to discover an abscess pointing upon the outer surface. Beneath the liver in the gastrohepatic space a large elastic tumor presented, suggesting a cyst of the pancreas. Upon opening this, one-half pint of greenish-yellow fluid was evacuated, at first of thin consistency, later of thicker and more glutinous character, and finally masses of dark tissue, broken-down liver substance and partially organized coagula were discovered. There was a large mass of semisolid consistency in the cavity, which it was deemed unwise to detach with the fingers lest hemorrhage result. The peritoneal cavity having been separated by packing, the walls of the abscess were sutured to the muscles and aponeuroses. A large rubber tube was inserted to the bottom of the cavity, together with strips of gauze. The laboratory findings previous to operation have already been referred to.

On October 3, examination of the stools showed no ameba coli. On October 4, agglutination test with the bacillus of

dysentery in 1 : 20 dilution, negative; in 1 : 50 dilution, negative. Gastric contents: Total amount, 58 cc.; total free HCl, 0.4 cc. $\frac{N}{10}$ NaOH Sol. = 0.014584 per cent.; total acidity, 1.8 cc. $\frac{N}{10}$ NaOH Sol.; lactic acid absent; sarcinæ absent.

As the patient vomited, the circumferential packing was removed on the fourth day, because it was thought possible that its pressure upon the stomach was aching as an irritant. The peritoneal cavity was quickly blocked off and never became infected. Drainage from the abscess cavity was removed on the seventh day and fresh gauze inserted; the masses within the sac separated and came away as sloughs.

October 5, hemoglobin, 75 per cent.; erythrocytes, 4,238,000; leukocytes, 14,900. October 7, leukocytes, 13,400. October 9, bile test negative. October 30, hemoglobin, 52 per cent.; erythrocytes, 2,976,000; leukocytes, 8,500. Closure of the cavity, which was six inches in depth, was slow, but complete and permanent.

Amebic liver abscess in temperate regions is only found about once in 100 to 125 autopsies. In the tropical zone, the condition is a frequent one, since the ameba coli is much more commonly present, and passive congestion of the liver is a predisposing cause of suppuration. The bad habits of eating, living and drinking with lack of exercise also contribute to the causation.

Our patient had not been out of Philadelphia except to the seashore. There had been no injury, no echinococci were present, nor were round worms, liver flukes or the balantidium coli found. According to Kieffer (*Philadelphia Medical Journal*, February 21, 1903), 20 to 25 per cent. of cases of severe amebic dysentery in tropical countries eventuate in liver abscess, and 85 per cent. of tropical liver abscess cases are due to infection by the ameba coli. The abscess may develop quickly, or may even be delayed for a year or more. While our case did not present the typical liver pus, was not as reddish-brown as usual, yet the indications point to abscess of this organ, although since the patient lived it is impossible to verify the location absolutely. At the time of the operation and subsequently, opinions were divided as to whether the liver or the pancreas was the seat of the disease. The patient presented, however, the usual symptoms of fever, enlargement

of the liver, pain, pallor rather than jaundice, with tendency to liver decubitus rather than dorsal. She had not had a chill, but had perspired. At the time of operation, the laboratory report as to the presence of amebæ was considered as definite, but Dr. Steele's subsequent investigations do not seem to be as positive.

A liver abscess which was reached across the pleural cavity by an incision made in the eighth interspace and the resection of a rib, was reported by Dr. Musser and myself* several years ago. The two pleural surfaces were sutured together in the shape of a parallelogram around the opening, the diaphragm was then perforated and the abscess in the liver reached and drained.

A CONSIDERATION OF SOME OF THE METHODS TO BE PURSUED IN THE DIAGNOSIS OF THE DISEASES OF THE RECTUM AND ANUS.†

BY LEWIS H. ADLER, JR., M.D., PHILADELPHIA, PA.

At the request of the directors of the Society I have prepared this paper, and I trust that its character will prove such that the general practitioner may gather from it some points of practical importance in dealing with the affections under consideration.

The utmost tact and gentleness are required on the part of the medical practitioner in dealing with persons afflicted with anal or rectal diseases. All patients suffering from maladies of this nature are especially prone to be depressed and are more or less nervous. This fact, combined with the natural restraint experienced in paying a first visit to a physician, should be realized by the examiner, and in order to aid such persons to recover their composure it is best to encourage them to give the history of their troubles in detail. While this consumes time, the more important object is accomplished of securing the coöperation of the patient in the subsequent steps of the investigation—to wit, the digital as well as, in some cases, the

* Abscess of Liver Following Amebic Dysentery—*Univ. Med. Mag.*, April, 1893.

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instrumental exploration of the bowel, without which a positive opinion cannot be formed as to the nature of any rectal ailment. These remarks are especially applicable to the treatment of females. Assent to a vaginal examination is much more readily obtained than is the consent to inspect the seat of rectal trouble.

Having obtained the subjective symptoms and being satisfied as to the existence of a rectal lesion, we proceed to confirm the provisional diagnosis and to obtain positive information upon which to base the prognosis and to guide the treatment, by making a thorough local examination of the anus and adjacent parts, including the rectum. If possible, the patient should have the bowel emptied by an enema a short time prior to attempting the examination. In the case of female patients especially, the neglect of this will frequently render a thorough investigation impossible, without recourse to general anesthesia—nitrous oxide gas or ether—owing to the patient's fear of an accident occurring, such as the escape of flatus. When this has not been done I have known the sphincter muscles to be so tightly closed that the surgeon's attempts to explore the parts were absolutely frustrated. When a specular examination is necessary—as in the investigation of the higher portions of the rectum or of the sigmoid flexure, it is absolutely essential that the lower bowel be free from fecal matter.

There are several positions in which the patient may be placed for the examination, but for general use I think that the most comfortable as well as the most delicate posture for the patient, and that most convenient of the examiner, is for the patient to be placed on a firm couch which has an elevation of three and one-half to four feet, to lie on the left side, the right shoulder turned away from the practitioner, the left arm brought behind the body, the right thigh only being well flexed upon the abdomen, and the left lower limb being kept perfectly straight. The buttocks should extend somewhat over the edge of the table, and the uppermost cheek may be raised by the patient's right hand. In examining with the fingers for the presence of strictures or growths situated above the lower four inches of the bowel, the patient by being directed to stand on his feet, but in a posture assumed as in sitting,

may by straining press the diseased part nearer the anus, so that at least an inch more of the bowel may be explored than can be done when the patient assumes the usual position, even though directions have been given to bear down.

Regarding light, either natural or artificial light may be employed. For an ordinary examination I prefer daylight. By means of a head-mirror the operator sitting facing the light and the patient's back being from the same, the light may be concentrated upon any particular point requiring observation.

Everything being in readiness for the examination, we now proceed to inspect the condition of the external parts. On separating the buttocks, the orifice of the anus will come into view. Its shape should be carefully observed as to whether it is abnormally narrowed or dilated, and whether the pigment of the surrounding skin is natural, increased or lessened. Eruptions of any kind — eczematous, syphilitic, parasitic or otherwise — should be noticed.

In this connection, for the sake of emphasizing the importance of careful observation of conditions of this kind, I shall relate an incident of a patient who came to me complaining of a marked pruritus ani. After what I thought had been a thorough inspection of the parts and I was about to apply the usual treatment for this malady when no discoverable local cause for its existence is manifested, I noticed a black speck at the root of one of the hairs. Upon further examination others were observed which proved to be full-fledged pediculi. External hemorrhoids, epitheliomata or condylomata will also be noted, if present. Palpation will enable us to detect any induration that exists, which may be due to a fistulous tract or to an abscess. If the parts are covered with a discharge, it should be wiped away and its source traced, as to whether it is from an external opening of a fistulous tract, etc.

If the anal aperture is not abnormally contracted and the patient be requested to strain while the examiner puts on the stretch with the thumbs the opposite sides of the anal outlet, and repeats this process around the circumference of the anus, a pretty good view of the anal canal may be obtained. In this manner, internal hemorrhoids, ulcers and the internal openings of many fistulæ may be seen.

The next step is to make a digital examination of the inte-

rior of the rectum. It is by this means that the most important information is to be gleaned, and it is a procedure that should never be omitted in any cases of presumed rectal trouble. Such an investigation is not a very pleasant one, either to the patient or to the practitioner, yet without making it the physician needlessly sacrifices his reputation and risks possibly the patient's chance for the prolongation of life by early surgical interference, as in cases of carcinoma.

The method of making the examination is as follows: The nail of the index finger being well trimmed and the finger lubricated with carbolized oil (5 per cent.), which I prefer to vaseline or similar substance, it is introduced into the bowel by a slow boring motion, in a direction at first slightly forward and then backward into the ampulla of the rectum. This should be done gradually, so as to allow the sphincters time to relax; if attempted too hurriedly or in too forcible a manner, spasm of the muscles will be to a certainty induced. As the finger enters the anus, the condition of the sphincters is to be noted. The strength, measured by the power of resistance, will be found to vary greatly in different persons. In the aged or debilitated it is apt to be very weak, and just the reverse in the strong and healthy. In persons of especially nervous tendency, and in cases of irritable ulcer (fissure) of the anus, a contraction may be met with, which, owing to the pain occasioned by an attempted examination, will render it an impossibility without recourse to an anesthetic (local and otherwise). As the finger passes beyond the margin of the external sphincter it should be swept around the anal canal in order to determine, if possible, the existence of any ulceration or other abnormal condition. It is just between the internal and the external sphincter muscles that most of the internal openings of fistulæ are found, and it is at this point that the presence of small foreign bodies may be detected, which have lodged in the crypts or in the mucous membrane.

At this point a word about internal hemorrhoids may not prove amiss. Their presence may be perceived by a digital examination, but only, in my opinion and experience, when they are thickened by inflammatory changes. Otherwise, it is impossible to recognize them by the sense of touch, and this is so in the majority of cases. Masses of hemorrhoids are fre-

quently found upon ocular inspection after dilation of the sphincters, the prior existence of which could not be ascertained by the tactile sense.

The finger should now be passed its full length into the bowel unless prevented by some abnormal obstruction, such as a stricture, etc. By instructing the patient to bear down forcibly an additional one-half inch of the rectum can be explored. Another one-half inch may be gained by the surgeon pressing upward upon the perineum with the thumb over this region and the other fingers of the examining hand kept extended and carried backward along the intergluteal groove. Usually an examination is made with the other fingers closed in the palm and the soft parts are pushed upon by the knuckles. This procedure prevents the full passage of the index finger.

In the manner indicated, about three and one-half or four inches of the rectum may be explored, together with the prostate, the neck of the bladder, the uterus, etc.

In making a rectal examination it must be borne in mind that very frequently two or more rectal diseases coexist, as for instance a polypoid growth complicating a fissure, or malignant disease existing with a fistula and hemorrhoids.

Malignant infiltration or a benign stricture can be readily detected if situated within reach. By sweeping the finger around the mucous membrane, its general condition can be noted; a general laxity or smoothness of the normal folds indicating atony; and a harshness and dryness, some alteration in the normal secretions due in all probability to atrophy of the glands. Ulceration, when not merely superficial, may be recognized by the induration around their edges. Polypi can be readily felt, but in examining for them it is important that the finger be brought from above downward, as otherwise the growth may be pushed out of reach owing to the length of its pedicle, and its presence never recognized owing to its smoothness and usual slimy condition. Fecal masses in the rectal pouch can be recognized without difficulty.

In withdrawing the examining finger the coccyx should be grasped between the thumb and finger and moved backward and forward to determine its mobility and whether any tenderness exists.

Finally, upon the finger being withdrawn, several points may

be gleaned by inspecting it. Should fecal matter have been encountered some of it will probably adhere to the digit. Its color, consistency and odor may be thus determined. The presence of blood, mucus or pus in the rectum may be likewise thus ascertained. In carcinoma of the rectum the odor imparted to the finger is to my mind pathognomonic of the disease. No other malady with which I am acquainted gives that sickening, feculent smell.

THE SURGICAL RELATION OF THE VERMIFORM APPENDIX TO PERFORATION IN TYPHOID FEVER.*

BY LEVI JAY HAMMOND, M.D., PHILADELPHIA, PA.

To within a few years, perforation and its well-nigh fatal consequence, perforative peritonitis, occurring in the course of typhoid fever was regarded as a complication, relief of which was beyond possible hope of surgical intervention, until E. Leyden in 1884 ⁽¹⁾ recommended it as a rational procedure, likening the condition to suppurative pleuritis. Later in the same year, Mikulicz ⁽²⁾ reported three of his own cases, in addition to reviewing those previously recorded in literature. In 1886 Dr. J. C. Wilson ⁽³⁾ strongly advocated it in terms that compelled the surgeon to no longer delay operative intervention, remarking that "The courage to perform laparotomy at this time will come of the knowledge that the only alternative is the patient's death."

Encouraged by these bold advocates, surgeons throughout the length and breadth of the world have kept literature well sprinkled with reports of operations for this heretofore fatal complication, even in the face of so high mortality as 80.64 per cent. (Keen), 73.78 per cent. (Finney), and 88 per cent. (Monad). Yet when we contrast the mortality of 95 per cent. (Harvey Cushing) in unoperated cases with the above, it gives quite a sufficient margin to encourage the undertaking.

Our efforts will probably not be crowned with greater success until the clinician can determine the time of rupture in a

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given case, or the preperforative stage as pointed out by Cushing. The greatest possibilities, however, seem to lie in the removal of conditions that would predispose toward perforation.

The prophylaxis, therefore, in perforative peritonitis from typhoid fever, is the pivot upon which every effort should revolve until either the cause is removed or accuracy in diagnosis has enabled the clinician to recognize the preperforative stage, as prompt interference after preperforation has taken place has not evidenced any marked lowering in the mortality table, as shown by analysis of cases recorded by Finney, Cushing, Keen and others.

The appendix vermiformis is the seat of perforation in typhoid fever according to Cushing in 9.6 per cent. of cases of perforation; according to Fitz in 3 per cent. of 167 cases; according to Hopfenhausen in 7 per cent. of 108 cases.

According to Osler, Fitz, Murchison and others, perforation occurs in 3 per cent. of all cases of typhoid fever. It is the cause of death in from 6 to 7 per cent. of all fatal cases. The ileum, according to Finney, is the seat of perforation in 80 per cent., large intestine in 12 per cent. and the appendix in 5 per cent.

It is especially in this 5 per cent. of appendiceal perforations in typhoid fever that the author is concerned; first, because of the belief that in addition to the 5 per cent. of perforations in typhoid cases arising from the appendix alone, there is a large number of cases of perforation occurring in the ileum and ascending colon that can be directly traced to pre-existing disease of the vermiform appendix, and in support of this belief the following cases seem to bear witness:—

CASE 1. (March, 1903.) A female, aged 26 years, a member of a religious order, had been stricken with typhoid fever 2 weeks before symptoms of perforation of the bowel presented themselves to her attending physician. There had been, however, from the very onset of the disease, in addition to headache, backache and quite an extensive degree of nervousness, much pain in the right lower quadrant of the abdomen, associated with early and continued abdominal tympany; liver dullness was absent, splenic dullness increased.

When seen in consultation on the fifteenth day of the disease, she complained bitterly of severe and constant abdominal

pain especially in the right iliac region, constant nausea and some vomiting; pulse 140, temperature 100° . The pulse rate from the beginning of her illness had been unusually high, the chart showing it at no time less than 120. Temperature, which at this time was 100° , had ranged during the previous 2 weeks between 102.2° in the morning to 105° , the highest, in the afternoon. The pinched expression was pronounced and the patient in every way showed evidence of great illness. The point of greatest tenderness was just above and to the right of the pubes. Blood count at this time showed leukocytes to be 11,000. The patient was again seen 4 hours later, and a second blood count made, showing a leukocytosis of 14,000. Operation was at once advised.

Under ether anesthesia an incision 5 inches in length was made along the outer border of the right rectus muscle. The abdomen was found filled with gas and a large quantity of chocolate-colored fluid mixed with feces, that the exudate had made no attempt at walling off. The opening in the bowel was readily found because of its great extent, in the ileum about 10 to 12 centimeters from the valve. The rent in the bowel involved nearly the entire lumen transverse to its long axis. The ileum and several inches of the ascending colon were firmly anchored by well organized adhesions, evidently of long standing. The appendix could not be brought into the incision because of this firm anchorage of itself and the colon to the outer parietal wall.

The rent in the bowel was closed by means of the Czerny-Lembert sutures, the abdomen flushed with normal salt solution and afterward dried by means of sterile gauze mopping. Plain sterile gauze was packed about the sutured bowel and brought out through the incision, the remainder of it being closed.

Notwithstanding the extreme condition of the patient before and at the time of operation, she seemed to stand it well, and, if anything, somewhat rallied from it; there was certainly at least no pronounced shock following the operation; there was not any pronounced improvement, however, and the patient died 60 hours later.

AUTOPSY: Anatomical Diagnosis: Perforation of the ileum about 12 centimeters above the ileocecal valve involving the

entire bowel. The deep sutures had firmly held while the Lembert sutures showed that they had been dragged upon by some tension which had been exerted upon them. Agglutination of the coils of the ileum existed throughout most of the lower right side. The appendix was cicatricial to near its distal extremity, where it was firmly adherent to the lateral wall of the parietal peritoneum. It derived its nutrition entirely from this source. The colon was also firmly bound down. The position occupied by the appendix showed clearly the tension that it had exerted on the closed wound in the ileum. There had been, however, no escape of the contents of the bowel into the general peritoneal cavity after operation. The adhesions found between the coils of the intestines and also those about the appendix and colon were so firmly organized that they could not have occurred from the appendicitis in this attack.

In going over the earlier history of the patient, I find that she had suffered for some time from dull aching in the right side, though never any decided pain, often extending down the right leg, with spells of nausea, occasional vomiting and obstinate constipation; in other words, a very clear history of an insidious appendicitis.

CASE 2. (October, 1903.) A female, aged 22 years, married. Was seen in consultation on the fifth day of her illness, which was thought by her attending physician to be typhoid fever, though somewhat in doubt because of the history of an attack of appendicitis, mild in type, some months previous. In the beginning the patient had a chill with headache, backache and some epistaxis. The abdomen was somewhat tympanitic, liver dulness absent and splenic alteration could not be detected. There was considerable pain, which was constant, and there was marked tenderness on the slightest pressure in the right iliac region, extending up as high as the costal cartilages. There were constant nausea, anorexia and constipation; pulse 120, temperature when I saw her at noon 101.8° . Previous to this, temperature record showed a variance from 101° in the morning to 102.4° in the afternoon. On palpation, rigidity was marked and an inflammatory mass could be distinctly felt in the region of the appendix. The tongue was coated with a dirty brown coating and flabby tooth-marked edges.

With the history of a previous attack, therefore, almost certainly extensive adhesions, and with the undoubted presence of an acute attack now existing, I felt it was good counsel to advise immediate operation for the removal of the appendix, even in the face of a probably developing typhoid fever, recalling, as I did, the clinical picture of the preceding case, which I had seen but a few months before.

OPERATION, on the seventh day of illness, ether anesthesia. Incision was made $3\frac{1}{2}$ inches in length directly over McBurney's point. After a search of several minutes, an unusually short appendix with a cicatricial centre was found embedded in an inflammatory mass behind the cecum. There was no pus present, though the intestines about the ileocecal region were intensely injected, and in several places there was agglutination of the coils of the ileum in the lower 2 feet. The mesenteric glands seemed everywhere greatly enlarged and, to the sense of touch so like the appendix that several times during the search they were brought out through the incision in mistake for the appendix. After taking much pains to break up all adhesions, the incision was closed without drainage and the patient made an uneventful recovery. Stitches were removed on the tenth day.

The operation in no way interfered with the natural course of the fever from which she was suffering. Microscopic examination of a transverse section of the appendix showed that complete cicatricial obliteration of the lumen had not yet occurred.

Blood count on the morning of the operation showed the number of white corpuscles 11,000. Positive diagnosis by the Widal reaction was made on the eighth day, or the day following operation. Temperature throughout the illness showed the highest reached in the afternoon, 103.8° , morning temperature 102° . The pulse ranged between 100 and 116. The entire course of the disease was characterized by constipation, it being necessary to use enemas whenever bowel movements were secured.

While the pathologic condition found in these two cases does not give the whole truth, it certainly goes far toward presenting a clue along the lines of prophylaxis in perforative peritonitis.

I am thoroughly convinced that in Case 1 the function of the bowel was so impaired by adhesions, not only of the coils of the ileum to each other, but the tension caused by adhesion of the appendix to the lateral parietal peritoneum, which favored solution in the continuity of the bowel at the point of ulceration at the site of Peyer's patches, was entirely responsible for the tremendous rent that took place. This was demonstrable at the post mortem, which showed the great amount of tension on the superficial sutures.

In Case 2, the only interpretation that could be placed upon the extensive adhesions so like those found in Case 1, is that a like result should have been expected. The inflammatory exudate which takes place after every attack of appendicitis, it matters not how mild the type, is certain to impair to a degree the function of the bowel, not only immediately about the ileocecal region, but often extending over a considerable extent of the ileum, disarranging the circulation and in this way bringing about structural change in the bowel, interfering as well with the fecal current, and together serving as a most potent factor in the production of perforation.

When the appendix has once been the seat of inflammatory change, a disease like typhoid fever is sure to light up a recurrence, and as at best its powers of resistance are poor, it could hardly be expected to escape rupture within the organ itself, or what would seem more often to take place, rupture of a Peyer's patch, which if not actually caused by impairment of the function due to preexisting disease in the appendix, may be regarded as at least favoring it. Not only do the cases here reported bear out this belief, but many of those recorded do also, notably two of Osler's cases; one on admission had an inflammatory mass the size of a walnut in the region of the appendix, while the other at the autopsy showed perforation of the ileocecal region and the appendix embedded in an inflammatory mass. One of Hare's two cases also showed preexisting disease in the appendix. Indeed proof of preexisting disease in the appendix in cases of perforation in typhoid fever is not wanting if careful analysis be made of the literature on the subject. Toft says that from personal investigation of 300 cases of illness of all sorts, every third person between the ages of twenty and seventy showed evidence of present or past

traces of inflammation of the appendix, and that actual structural change existed in 5 per cent. of all bodies examined. Kraussald declares that this percentage is rather too low than too high.

If these percentages can be considered as accurate, it is within the power of the surgeon to reduce the mortality in perforative peritonitis in typhoid fever from 80 per cent. to 73 per cent.; first, by eliminating the appendix as a factor; second, by freeing the agglutinated intestines from adhesions caused by previous attacks of appendicitis, which afford possibility of still further serving as prophylaxis against occurrence of perforation in the ileum. The majority of observers agree that acute appendicitis occurring during the course of typhoid fever is merely a coincidence, and is probably in no instance the result of the bacillus of Eberth, nor due to the general infective process resulting from the fever.

Hopfenhausen (⁴) shows in a study of thirty appendices removed from typhoid subjects dying from either asthenia or toxemia, that no special change existed in the appendix further than slight cellular infiltration, in no way sufficient to interfere with the function of the organ, and only that change that would be found anywhere in the intestinal tract that is supplied with lymphoid tissue; the type of appendicitis, therefore, that may be looked for during the course of typhoid fever, will usually be the recurrent.

Clinicians are generally agreed that the opinion, formerly held, of doubting the existence of typhoid fever when bowel symptoms are absent, is entirely erroneous and, as a matter of fact, bowel lesions are, if the bowel be previously healthy, rather atypical than typical symptoms at the onset of the disease.

With this knowledge in mind, when a case of typhoid fever presents, among its earliest symptoms, pain in the right lower quadrant of the abdomen with tenderness, nausea or vomiting, aching or discomfort in the groin, oftentimes extending down the leg, anorexia; and last, but not least, rigidity of the right rectus muscle, a relighting up of a preexisting disease should be suspected. Knowing, as we now do, that the right iliac fossa is not tender early in typhoid fever, at least not until after the seventh or eighth day, when the bacillus of Eberth is deposited

in the glands of the intestines (Peyer's patches), immediate laparotomy would seem the only wise course to pursue under such circumstances. At operation not only should the appendix be removed, but also the agglutinated coils of the ileum should be thoroughly freed from their tied-down position, which must of necessity impair nutrition of the parts, and consequently diminish its structural resistance.

Dieulafoy states that if an appendicitis exist, the course of the fever will be higher early in the disease, and it may also be inferred that the morning drop in the temperature will be less pronounced.

A study of the temperature in the cases recorded by Finney, Osler, Fitz, Cushing and others confirms this observation, especially in reference to the pulse, which is found in uncomplicated cases of typhoid fever.

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IRREGULAR MENSTRUATION AND TREATMENT.

BY E. C. WILLEY, M.D., LOUISVILLE, KY.

Practitioners of medicine are consulted by no class of patients who display greater solicitude than those who have amenorrhea.

In the popular mind failure of the menses to appear is supposed to be due either to pregnancy or tuberculosis, and either may cause a degree of anxiety that is truly intense.

The term amenorrhea is used to mean the total absence of the menstrual discharge, or a marked deficiency in the quantity of the flow. Amenorrhea may be physiological or pathological. During pregnancy the absence of the menstrual discharge is, of course, physiological and demands no consideration in this article. When pathological, the causes of amenorrhea may be said in general to be due to the following:

(1) Taking cold, at or near the menstrual epoch. (2) Severe mental perturbation, as fright, sorrow, or great elation of

spirit. (3) It may be symptomatic in several affections, as tuberculosis, anemia, chlorosis, syphilis, typhoid fever, nephritis, pelvic peritonitis, and other morbid conditions. (4) Obesity. (5) Luxurious life, or overtaxing the nervous system. (6) Stenosis or atresia of the cervical canal, or imperfect development of the tubes, ovaries or uterus. (7) Vicarious menstruation may make the condition obscure, there being a discharge at the regular monthly periods from the nose, lungs, bladder, stomach, nipple or other part.

The treatment of amenorrhea must comprehend attention to general considerations, and special indications must be remembered in the various expressions of amenorrhea.

The treatment must, in a word, comprehend remedies and measures which are indicated by the etiological factors present in every case which comes up for treatment. When the amenorrhea is caused by one having contracted cold, the patient should have a warm sitz bath, and hot applications should be applied to the abdomen and thighs. Often a hot vaginal injection will serve a most useful purpose, and a laxative, preferably a saline, will greatly aid in bringing on the flow.

In amenorrhea, delayed menstruation and dysmenorrhea, Ergoapiol (Smith) has acted in my hands in a most satisfactory manner. In scanty menstruation I found it particularly valuable, and I shall enter in detail about one of a series of cases of this character, later on in this article, where this agent brought on a full menstruation and the general health of the patient began to improve at once. When mental perturbation is a factor in these cases it is manifestly the duty of the physician to have the environments of the patient made as quiet as possible, and anti-spasmodic or nerve sedatives should be added to the treatment.

When amenorrhea is associated with syphilis, the uric acid diathesis or morbid condition must receive correct treatment. My experience with Ergoapiol (Smith) is such that I regard it as an indispensable remedy in all expressions of amenorrhea along with proper remedies for any diseased condition associated in the causation of the affection. Of course those cases where the amenorrhea is due to atresia of the cervical canal, and to any other condition which is remedial only by surgical means, drugs will prove of no avail. The same can be said of

instances in the amenorrhea due to a rudimentary state of the female organs of reproduction.

A lady some time ago brought her daughter to my office for treatment of amenorrhea. The girl was 18 years old and was visibly anemic. She had an indifferent appetite and was more or less dispirited. She had enough menstrual flow each month to stain the napkin, but this was all that could be said. I had this patient to take Ergoapiol (Smith), one capsule after each meal, and on going to bed regularly for a month. At the next menstrual period the discharge was without pain and free, and the quantity and color was as natural as she had ever known her menstruation to be. She took Ergoapiol (Smith) in the same way another month, and then ceased to have any further trouble. Her color is good and her appetite is likewise excellent; she is full of spirit, and, in a word, well.

A lady aged 33 had scanty menstruation which had covered the period of a year. At no time in the year had her menstrual period been longer than eighteen hours, but generally twelve hours told the tale. Her menses were not only scanty, but the color of the menstrual blood was pale, and this was attended with a disagreeable odor. This woman had no associated disease that most searching examination could bring out. Still she had steadily increased in flesh for the last two years, and to this I attributed the amenorrhea.

I had this patient to take systematic exercise and a dietary that was rational, and to take Ergoapiol (Smith) with regularity, a capsule four times a day. After two months this woman ceased to take the remedy, her menstruation having become normal.

A girl 20 years old was sent to me by the matron of a boarding school. She enjoyed good health prior to entering the school, but for the past three months she had not menstruated and was suffering constantly with vertigo and had attacks of hysteria. I attributed the amenorrhea to change of conditions of life—that of an open life on a farm to that of a shut-in inactive life. Ergoapiol (Smith) was given after each meal for two weeks prior to the day of her usual menstruation. This brought her menses on fully. She has since had no further trouble in this way.

Mrs. A. P. L., aged 35. This lady suffered with frequent

attacks of headache, had backaches nearly all the time, and suffered greatly with vertigo. She was the mother of three children, the youngest being 6 years old. For the past four years she had constantly had scanty menstruation and the blood was very pale. She rarely had the menstrual flow to continue longer than fifteen hours. I was satisfied that the vertigo and all her distress was due to insufficient menstrual flow, and I accordingly put her on Ergoapiol (Smith). She took it through the month, one capsule after each meal; but for a week before the expected period she took two capsules instead of one. She was greatly pleased this time to have a full and free menstruation. Acting on my advice, she took the capsules three times daily for two months, and this acted in a happy manner and she has now passed an entire year and has not failed to menstruate freely.

My diagnosis was fully confirmed by this woman's health being good in every way since the establishment of menses on a basis of health.—*The Southern Practitioner*, July, 1902.

A UNIQUE ACCIDENT.

BY ALEX. RIXA, M.D., NEW YORK CITY.

H. C., about 40 years of age, weighing about 200 pounds, came home late in the night in a "festive condition." Inserting his key in the door lock, his foot slipped and he fell with his face, respectively his mouth, on the edge of the key, severing the tissues below the lower gum and the sublingual gland.

When I arrived at the house he was vomiting profusely. However, when the vomiting ceased for a while, I noticed blood oozing from behind the lower lip, intermixed with a yellowish, somewhat frothy liquid pouring out in gushes. I endeavored to stop the flow, but did not succeed owing to the repeated vomiting spells.

At last I succeeded to inject hypodermically a half a grain of morphine, in consequence of which a cessation of vomiting following shortly.

After a careful examination of the injured parts, I concluded it could be but the sublingual gland, which emits the secretions, and was not a little surprised at the enormous quantity,

as, to my knowledge, this gland is very small and weighs only one dram. I intended to put some stitches in the tear, but patient protested against it in his semi-intoxicated condition. I had to resort therefore to the application of strips of adhesive plaster to the surface of the lower lip, thus compressing the severed parts.

As a matter of fact, this procedure stopped the evacuation and I left the patient in quite a comfortable condition.

The beneficial action of the morphine, however, was of short duration, as I was summoned again about two hours after, with the frightened remark that the patient is suffocating.

When I arrived, I found patient hanging down his head from the bed, gasping for breath, as some food-masses could not pass through the mouth owing to the compressed chin. I tore off the bandage, and with the contents of the stomach the little gland commenced to flow with renewed vigor. By this time, the man having sobered somewhat, after some arguments he permitted me to put in the necessary sutures.

Notwithstanding the internal administration of some stomachia the irritation continued, vomiting would not cease. I was compelled to inject hypodermically another dose of morphine, which after some minutes stopped that wretched retching.

The next day, however, as the effect of the morphine passed away, vomiting recurred.

Considering the fact that a simple alcoholic irritation of the stomach would yield to the prescribed treatment, I concluded that it could be but the swallowed secretions of the sublingual gland which caused this persistent irritation.

First, I considered a washing of the stomach, but, as, previously, I met with the opposition of patient.

As a matter of course, there was only an internal medication left for consideration. I decided therefore, on a simple innocuous antiseptic—glycozone—with which I had quite a satisfactory experience in several cases of ptomaine poisoning. I prescribed it in repeated tablespoonful doses with rapid and gratifying results.

Notwithstanding the liberal use of antiseptic washes and sprays, the wound in the mouth was healing but very slowly. —Reprinted from *The Medical Summary*, Jan., 1904.

RECENT ADVANCES IN OUR KNOWLEDGE OF IMMUNITY.*

BY JOSEPH MCFARLAND, M.D., PHILADELPHIA, PA.

The recent advances in our knowledge of immunity, about which I am to address you for twenty minutes this evening, comprehend a series of investigations, the greater number of which have been stimulated by the pregnant suggestions of Metchnikoff and Ehrlich, and have opened up a most fascinating and fruitful field of active research in physiologic chemistry. It might almost be said that the majority of workers in pathology, bacteriology and physiologic chemistry have neglected other subjects during the past five years to devote themselves to studies of the phenomena of immunity.

The nature of the body defenses has been shown, as the result of these investigations, to be discouragingly complicated, and the voluminousness of the literature of the subject, as well as the new terminology that it contains, make it particularly apropos that frequent résumés be written for the benefit of those whose time being engrossed by other and more practical reading are unable to pursue the subject completely.

The phenomena of immunity, as we now describe those body reactions which seem to have a direct protective tendency, include the following: (1) Natural immunity against poisons; (2) natural immunity against organized bodies; (3) acquired immunity against poisons; (4) acquired immunity against organized bodies; (5) the production of antitoxin and other antibodies; (6) the production of hemolysins and other cytotoxins; (7) the production of bacteriolysins; (8) the phenomena of agglutination; (9) the phenomena of specific precipitation.

It would be impossible in the brief time allotted to endeavor to give an account of each of these particular phenomena, but a description of the most interesting and suggestive theory of immunity will bring out a sufficient consideration of the greater number to enable one to understand their principal features and mode of occurrence.

Of course it is well known that two great theories are offered for the explanation of immunity, the older, that of Metchnik-

*Read before the Philadelphia County Medical Society, April 27, 1904.

off, being known as "The Theory of Phagocytosis," the more recent, that of Ehrlich, as "The Lateral Chain Theory."

Metchnikoff's theory was based on the microscopic observations of infected water fleas or daphnia. When these minute organisms were infected by fungus they sometimes died and sometimes recovered. In the cases that recovered it was observed that certain of the body cells clustered about the invading parasites and seemed to destroy them, whereas in the cases that died the cells seemed unable so to do. Metchnikoff inferred that the successful antagonism of the parasites by the cells was the explanation of the recovery of the infected daphnia, and finding that by some peculiar phenomena the body cells of higher animals attacked and devoured parasitic organisms, he drew the justifiable inference that the success of the body in resisting invasion depended upon the successful warfare of its phagocytic army against the invading parasites. The theory is, therefore, one in which cells, active living cells, are engaged in attacking, devouring, killing, digesting and disposing of, the body's enemies.

At the time this theory was promulgated, it was not thought that the phenomena of immunity also embraced defenses against intoxication and means of destroying and annulling the effects of poisons; and when it was shown that such must be included, the theory of Metchnikoff was found wanting. Though the theory was, so to speak, based upon morphological appearances, its ultimate explanation had to be looked for in chemical conditions arising within cells; for it is evident that microorganisms taken up by the cells can only be destroyed through some chemical substance—some digestive enzyme—which they contain, so that after all the theory was a chemical one, the chemical substance simply being regarded as a component part of the phagocytic cells.

The lateral chain theory of Ehrlich, which made its appearance in 1897, is a purely chemical theory, in which the cells of the body are not supposed to play any active part, but in which all of the phenomena of immunity are thought to depend upon substances in solution in the blood plasma. It is true that Metchnikoff has endeavored to show that these active substances, whose presence is easily demonstrable, may be the products of cellular activity. Indeed, he is inclined to view

them as nothing but cellular enzymes which, through the accidental destruction of the cells by which they were produced, have been set free in the blood serum ; but this explanation, satisfactory as it would undoubtedly be, cannot be proved, and the recent experiments of Macfadden and Rowland would seem to indicate that the leukocytes which constitute Metchnikoff's great phagocytic army, do not contain the active substances he supposes. We are, therefore, inclined to believe that the theory of Metchnikoff, fascinating as it is, is in error, and that the weight of evidence is in favor of some such view as is expressed in the lateral chain theory. This theory, suggested by Ehrlich in 1897, was the outcome of a series of studies into the constitution of diphtheria toxin and, to be strictly accurate, one should follow the development of the hypothesis from this point of view; but it has always seemed to me to be more comprehensible when viewed from the standpoint of cellular nutrition, and it is thus that I wish to endeavor briefly to explain it this evening.

The lateral chain theory is based upon specific affinities existing between the cells and certain substances chemically adapted to their metabolic requirements. It is well known to every physiologist that certain cells have a peculiar selective tendency which leads them to absorb substances never touched by others. Examples of this are most easily detected in such toxic conditions as follow the administration of strychnin, or occur in tetanus and diphtheria. Thus, in strychnin and tetanus intoxication the brunt of intoxication seems to fall upon the motor cells of the nervous system, and in diphtheria intoxication upon the peripheral nerves, possibly because these particular elements are more susceptible to the action of the poison, but probably because they alone are adapted to absorb it.

Ehrlich accounts for this specific affinity by presuming that the cell protoplasm is chemically so constituted as to provide a number of side chains or combining atomic groups by which the various nutrient combinations necessitated by the cellular metabolism may be provided for. These side chains or lateral chains of combining atoms he describes as "receptors." The corresponding molecular combinations adapted for combination with them, he describes as "haptophores." Each cell is supposed to possess many and varied receptors which by

appropriate combinations with their adapted haptophores maintain the cellular nutrition and provide the cells with such substances as they need in performing their respective functions.

Under normal conditions it may be presumed that all the haptophorus molecules present in the blood are normally adapted for combination with the receptors of certain cells. Many of these haptophores which furnish ordinarily nutritive elements must be adapted for combination with many, perhaps the great majority, of cells. Other haptophores convey to certain cells substances required in their peculiar metabolism. A few haptophores may be adapted to receptors possessed by cells of one kind only.

It is not conceivable that the parietal cells of the gastric glands by which the hydrochloric acid of the gastric juice is secreted shall possess identical receptors adapted to the same haptophores as the motor cells of the spinal cord, whose function it is to discharge nervous impulses.

In inorganic chemistry, isomerism is a well known fact. In physiologic chemistry it seems probable that different substances of very similar chemical combinations may possess very similar, though not identical, haptophores, and that under morbid conditions there may appear in the body as a result of its own energies, or as a result of the metabolism of parasites, abnormal or even foreign haptophores more or less isomerically identical with the normal haptophores and capable of the same combinations, but which combinations instead of always resulting in the normal nutrition of the cells may bring to them nonutilizable or harmful substances by which their normal activities may be inhibited or abnormal energies initiated, so that disease becomes inevitable. From this point of view, the convulsions occasioned by tetanus toxin and strychnin depend upon the union of the receptors of the motor cells with abnormal though perfectly adapted haptophores possessing more or less isomerism with certain of the albuminous constituents of the blood through which these cells are normally nourished, but which act injuriously upon them by inhibiting their normal nutrition and partially asphyxiating them or directly poisoning them.

So much for the matter of specific affinities, the study of

which shows us that the poisonous character of any substance must depend upon the adaption of its haptophorous molecules to the receptors of the cells, and that in all cases in which the cells are without receptors possessing such adaption, natural immunity must exist.

Ehrlich's study of the constitution of the diphtheria toxin led to the discovery that the active substances are not simple but complex, and that there are present both haptophorous and toxophorous groups, and that the haptophorous molecules may attach themselves to the cells independently of toxophorous action, though the toxophores are unable to effect such combinations in the absence of the haptophores. Natural immunity may, therefore, depend upon the failure of enough toxophorous substance to be brought into contact with the cellular substance by the haptophorous combinations, as well as upon the complete absence of haptophorous unions. This probably explains the interesting cases in which immunity is relative; that is, a certain quantity of poisonous material fails to affect an animal at all, though a very large quantity produces a reaction, and may be fatal.

The cell receptors are essential to the maintenance of cellular nutrition, and should any of them form combinations with haptophores, morphologically or chemically adapted for combination with them, but unable to nourish them, the disadvantages under which the cell would find itself would probably result in the formation of new receptors, or, as Ehrlich expresses it, in the regeneration of receptors by which the nutrition of the cell could be maintained. The activity of regeneration would be in proportion to the number of useless combination effected. This regeneration of receptors is believed by Ehrlich to explain all of the phenomena of acquired immunity.

It is known that if an animal be injected with a quantity of poison insufficient to bring about its death, it acquires the ability to endure without injury a larger quantity of that poison, and the more frequently it is thus obliged to endure it the greater its power of endurance becomes, when in the case of certain poisons—diphtheria toxin, tetanus toxin, etc.—the animal may be inured to the effect of hundreds of times the original lethal dose. Such immunization can only be effected in animals possessing receptors and, therefore, a partial suscepti-

bility to the intoxication. The endurance acquired is supposed to depend upon the increasing number of receptors by which the increasing number of haptophores can combine with the cell without completely inhibiting its functions. When no haptophorous molecules of an undesirable nature are present in the blood, the presence of these excessive receptors is disadvantageous, and the cell seems to eliminate them into the surrounding tissue juices, from which they enter the blood, where they seem to circulate for a considerable length of time before meeting final destruction or elimination from the body. Such detached receptors possess identical combining affinities with those still intact upon the cell, so that the appearance of appropriately adapted haptophorous molecules in the blood causes immediate combinations with them.

The antibodies, of which the antitoxin may be taken as a typical example, seem to owe their potency to the number of receptors contained in the blood serum, these receptors retaining their combining function in the blood of the animal in which they are produced, in the blood of any other animal into which they happen to be introduced, or *in vitro*.

In considering the phenomena of immunity against organized bodies of all kinds, phenomena which may be appropriately considered under the general heading, "cytolysis," we meet with a more difficult and more complicated reaction than has been described. The phenomena, instead of resembling ordinary chemical nutritions, more nearly approach those of digestion in which certain substances are active upon others for which they have specific affinities only in the presence of other intermediate substances. Thus, for example, pepsin transforms proteids only in the presence of hydrochloric acid, trypsin is activated by enterokinase, fibrinogen is transformed to fibrin only in the presence of calcium salts, and rennet acts upon caseinogen only under the same condition.

Intelligent understanding of these phenomena, which had long been observed by Buechner, Nuttall and others, and which constituted the essence of Pfeiffer's phenomenon, etc., began with investigations into the disappearance of heterogeneous blood corpuscles by Ehrlich and Morgenroth, who found that when the blood of any animal is repeatedly injected into the body of another, the blood of the second animal becomes hem-

olytic for the corpuscles of that particular kind of animal or particular animal with which it is injected, and that this reaction is accomplished through the presence of certain substances invariably present in the blood, and certain other substances appearing as the result of manipulation, and varying according to the degree of activity possessed by the blood of the manipulated animal.

Many subsequent investigations have shown that these two factors are invariable in all cases of cytolysis, that in all the actually digesting or dissolving substances, by which the organized body, whether yeasts, bacteria, parasites or tissue elements, are dissolved, are preexistent in the blood and comparatively invariable in activity. These substances are variously described as alexins, cytases, complementary substances and lysins. Whether they are specific in action, as thought by Ehrlich, is doubted by Bordet, and divergent views upon this matter are held by different investigators. The other substance, by which the actual solvent is activated and which varies in amount, according to the activity of the serum of the manipulated animal, is called the immune body, the intermediate body, the amboceptor, the desmon, *fixateur* and *substance sensibilisatrice*, by different writers. It is specific in each case. Thus, when an animal is repeatedly injected with red corpuscles, its serum develops a body that determines that solvent substances present in its, or in the bloods of other animals not manipulated, shall be exerted upon blood corpuscles; not upon blood corpuscles generally, but upon blood corpuscles of that particular kind with which the animal was injected. Or if the manipulated animal be injected with cultures of bacteria, the immune body or amboceptor developing in its blood will so activate the solvent substances of other bloods that they will destroy bacteria, not of any kind, but of the particular kind with which the manipulated animal was injected, and so the stimulation of any particular organized body introduced into an animal will cause the generation in its body of an amboceptor which activates the lysins to effect its solution only. The action then of the immune body or amboceptor is always specific. Without its presence the lysins or complementary bodies are inactive.

The fortunate result of the investigation of the phenomena

of immunity has been the successful utilization of immune serums in therapeusis, and in those cases in which the substances interact directly (antitoxins), there is no comparison with the therapeutic successes achieved. The whole world now concedes the value of antitoxin in the treatment of diphtheria. The varying success and failures of antivenene in the treatment of snakebite depend upon conditions readily understood. Antitetanic serum will prevent tetanus, though the tetanus toxin becomes so firmly anchored to the nerve cells through its haptophorous adaptions that the serum is of doubtful value for treatment.

But in the application of immune substances of indirect action (amboceptors and complements), we are confronted with the misfortune that though we can produce at will the amboceptor or sensitizing substance by which the destruction of organized bodies is brought about, the actual destruction of these bodies depends upon the lysin, which is invariable, and we are at the present time unfortunately unable to devise any practical means of increasing the most necessary and desirable lysin or complement upon which the activity of the serum must depend.

The specific agglutination and the specific precipitations doubtless depend upon conditions preliminary to or associated with the reactions already described; but their true significance is not understood and their practical bearing, from a therapeutic point of view, seems to be slight, so that we can at the present moment merely mention them as interesting phenomena.

Pharmaceutical and Chemical Displays at the World's Fair.

—A number of our readers may not be aware of the fact that the displays of pharmaceuticals and chemicals are located in the Palace of Liberal Arts. None should miss this as it certainly takes rank among the most interesting shown at the great Fair of St. Louis. A very interesting exhibit in this display is that of the old and well-known firm of William Warner & Company of Philadelphia. As has always been the custom of this firm, it leads in this as it does in everything it undertakes.

CACTINA IN FUNCTIONAL DISEASES OF THE HEART.*

BY JOHN L. HATCH, B.S., M.D., NEW YORK.

After referring to all recognized heart stimulants, Dr. Hatch concludes: The last in the list of cardiac stimulants, but by no means the least, is cactina. This drug is the proximate principle of the *Cereus Grandiflora* (night blooming cereus), and belongs to the natural order of the Cactaceæ, a plant indigenous to tropical America. This active principle was most successfully isolated by a pharmaceutical chemist of St. Louis—Frederick W. Sultan—who obtained it from the flowers and stems of the Mexican variety, which yields a greater and more constant quantity than any other species. This drug is non-irritant and can be applied to the conjunctiva in a ten per cent. solution without producing any noticeable effect. Therapeutic doses cause a rise in the arterial pressure and increase the pulse rate, whereas toxic doses cause first, acceleration of the pulse and a rise in arterial pressure that is followed by a drop in the pressure and a diminution in the rate of the pulse. The pulsation becomes irregular and spasmodic and the heart is finally arrested in systole.

A fair conclusion is, that the drug produces these effects chiefly by direct stimulation of the intra-cardiac ganglion.

From this we may summarize that the action of the cactina in therapeutic doses is to increase the musculo-motor energy of the heart, elevate the arterial tension with a corresponding increase in the height and force of the pulse wave, and to elevate the general nervous tone by stimulating the motor centres in the chord.

Cactina is indicated then whenever we need a powerful cardiac tonic stimulant.

Its greatest value has been shown in functional disturbances of the heart, such as simple dilatation and cardio-musculatony, in which there are no organic lesions.

It has a great advantage over digitalis in that it can be administered continuously without producing gastric irritation and without fear from cumulative action.

It is of use also in organic diseases of the heart, save in one instance, viz.: mitral stenosis, where digitalis is to be preferred

* Extracts from an article in the *Medical Examiner and Practitioner*.

because it prolongs the diastolic period, thus giving the ventricle time and power to empty itself.

The dose of cactina with which the best results have been obtained is 1-100 of a grain (in the form of Cactina Pillets), repeated at frequent intervals. The continued use reduces and regulates the pulse by giving strength and tone to the heart's action.

In several cases of functional disturbances of the heart, particularly tobacco heart, in which I have prescribed cactina, I have been able to reduce the pulse rate within a few hours, and by the withdrawal of the narcotic and continued use of the drug bring the patient to a normal condition.

My experience with cactina has been such that I put more faith in it for functional disturbances than any other remedy that I have tried.

How to Avoid Prescribing Opium and Morphine.—Dr. N. B. Shade of Washington, D. C., in an article published in the *Medical Summary*, refers to many unfortunate effects of prescribing opium and morphine, intimating that the depressing after-effects of the administration of these drugs more than offsets the temporary good accomplished by their use. He mentions a very prominent congressman whose life, in his opinion, was cut short by the administration of morphine hypodermically in the case of pneumonitis. Dr. Shade states that he still prescribes morphine, but very seldom, as he finds it much safer to use papine. Papine, in his opinion, possesses all the desirable qualities of opium with the bad qualities eliminated. Some of the brightest minds of the present age are now being devoted to the development of a therapy in which the primitive bad effects of many important drugs are eliminated. Where the therapeutic action of morphine or opium is desired, it would seem to be a safe procedure to give papine a trial.

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EDITORIAL.

ANTITETANIC SERUM AS A PROPHYLACTIC AGAINST TETANUS.

It has been shown that guinea pigs and other animals inoculated with the poison of tetanus, survive when treated at once with antitetanic serum. In France, Nocard observed 375 animals of various kinds, all of which had been wounded, accidentally or surgically, and subjected to tetanic infection. These animals were given antitetanic serum at once, before the disease had time to develop. As a result, not a single case of tetanus occurred among them. On the other hand, he noted fifty-five traumatized animals that had been exposed to tetanic infection, every one of which developed the disease.

In the August (1899) number of *Medicine*, Prof. Geo. F. Butler, M.D., says: "Dr. Joseph Hughes, one of the most eminent and conservative veterinary surgeons in Chicago, has used the serum as a prophylactic in over 500 cases following wounds, both surgical and accidental." Not a single case of tetanus has developed, though Dr. Hughes has used the serum

where by former experience he was justified in expecting the disease to manifest itself.

From this and similar reports it has been proposed to immediately inject antitetanic serum in every case of traumatism of a suspicious character, hoping in this manner to prevent the subsequent development of tetanus. The serum is harmless to man and may be given hypodermatically as the other serums. Nocard recommends that a first injection of ten cubic centimeters should be made as soon as possible after traumatism. A second injection should follow in from twelve to fifteen days.

It has been suggested to inject prophylactically all new-born infants in certain sections of Europe in which trismus neonatorum prevails.

In the *Therapeutic Gazette* for February 15, 1903, the editor directs attention to the fact that "although tetanus is, comparatively speaking, a rare disease, it is sufficiently frequent and fatal to make an antitetanic serum a much sought for remedy." He also pointed out the fact that the failure of an antitetanic serum depended "not upon the fact that it was possessed of no virtue, but rather because it was used too late to combat the disease." The same writer expresses the view that, "one fact stands out above all others, and that is, that thoroughly good results cannot be expected from antitetanic serum unless it be given in the very earliest stages of the infection. So true is this that experienced observers have insisted that its best results can be obtained only when it is administered immediately after exposure to infection, without waiting until the micro-organisms have had a chance to develop in the body and produce early symptoms of poisoning.

The editor of the *New York Medical Journal* in the issue of March 26, 1904, remarks that "the present drift of opinion seems to be to the effect that tetanus antitoxin while probably of considerable prophylactic efficacy is of little use as a curative agent. At a meeting of the Paris Society of Surgery, according to the same editorial, M. Labbe expressed the view, that since the injection of antitetanic serum has been employed as a routine prophylactic measure, the disappearance of tetanus after surgical operations in horses was a prime fact in support of its preventive efficiency. Furthermore, recent experience in the immediate topical employment of antitoxin in cases of toy

pistol injuries appears to support our trust in its prophylactic value."

Bazy (*Bulletins et Memoires de la Societe de Chirurgie de Paris*, 1896, N. S., XII, 186, 191) had four cases of tetanus develop in his wards. From that period he applied preventive treatment to all cases of wounds admitted to his service. He made twenty-one preventive inoculations of ten cubic centimeters each. None of these patients developed tetanus, although he says their wounds belonged to that category which includes most cases of the disease.

Dr. Joseph McFarland, in the *Journal of the American Medical Association* for July 4, 1903, reports the results of a series of observations upon 800 horses which illustrate the value of antitetanic serum as a prophylactic agent. During a period of four years there had been a death-rate of 10% from tetanus, in spite of all precautions. A systematic immunization with antitetanic serum was then begun. Injections of 10 to 25 cc. of serum were given every three months. As a result the death-rate from tetanus rapidly decreased, and in the second year had been reduced to less than 1%. The author believes that the practical conclusions to be drawn from these observations may be applied to the human subject. He thinks that antitetanic serum should be given as a prophylactic measure in all cases of suspicious wounds that are likely to be followed by tetanus.

Experiments made on guinea pigs by the author demonstrated that the dried serum fully protects inoculated animals.

At the twenty-ninth annual meeting of the Mississippi Valley Medical Association, held at Memphis, Tenn., October 7, 8, and 9, 1903, Dr. S. C. Stanton of Chicago contributed a valuable statistical paper on "The Prophylaxis of Tetanus" (*The Medical News*, October 31, 1903, page 860). Among the various prophylactic measures recommended by the author were the open treatment of all wounds, however insignificant, in which from the nature or surroundings there was any risk of tetanus; the immediate use of an antitetanic serum in all cases of Fourth of July wounds, wounds received in barnyards, gardens, or other places where the tetanus bacillus was likely to be present, or tetanus infection to occur. S.

THE SOCIAL PERIL.

The Social Evil, as it is generally called, is beginning to awaken more attention throughout enlightened communities than it has heretofore. This has been caused by the untiring efforts of dermatologists and syphilologists who have sounded the warning note in no unmeasured terms. In fact, they have so tirelessly written on the subject that the medical profession first, and the laity next, have been giving some attention to it. And this has all been due to the fact that venereal diseases have not abated, but, if anything, would seem to be on the increase.

The April grand jury of St. Louis, which made its report about June 1 last, has the following among its recommendations:

"It is the unanimous sentiment of this jury that this evil cannot be eradicated, and therefore it must be controlled, for which reason we recommend that a proper and efficient 'social evil law' be enacted and enforced. We further would have this law so framed that it be within the province of medical and police surveillance, and that certain districts be specified, * * * as under existing conditions we find that, far from suppressing this evil, it has gotten beyond all bounds and invaded the various resident sections of the city."

It has very wisely concluded that the total repression of prostitution is an impossibility, and its regulation the only feasible means of diminishing the large number of venereal diseases. And yet it must be admitted that the abolition of a number of *puelte publicæ* will only lead to an increase of that most dangerous class, the clandestine prostitutes. The regulation and examination of public women who are placed *en carte*, as they say in France, is a comparatively easy matter; but the obtaining of the necessary control over the women who ply their vocation in a clandestine manner and who have legitimate occupations (shop girls, type-writers, etc.) may certainly be regarded as an impossibility.

The French Society of Sanitary and Moral Prophylaxis has been holding its sessions since March 31, 1901, the date of its foundation. It has for its exclusive object the repression of venereal diseases, and it is enrolled in the league against syphilis. It holds monthly meetings, at which are considered those questions which naturally pertain to the object of the

society and its members. In Germany there exists a similar association.

We read in the *Journal of Cutaneous Diseases, including Syphilis*, for June, 1904, that on the 6th of March, 1904, the second congress of the Deutschen Gesellschaft zur Bekämpfung der Geschlechtes krankheiten assembled in Berlin. Prof. E. Lesser of Berlin read a paper on the Warfare Against Venereal Diseases in Germany. Among other things the *Journal* quotes him as saying: "In my opinion the most difficult problem in the struggle against venereal diseases, and one which must be firmly grasped, is the *sanitation of prostitution*. There is not the slightest doubt that prostitution is exclusively or, at all events, the main source of all venereal infection. The means taken for a better adjustment of the existing conditions and a purifying sanitation of prostitution leaves much to be desired. This is all the more calamitous since the great cities are the principal sources in the spread of venereal diseases, and in comparison with small towns the number of infections in cities increases in a geometrical rather than an arithmetical proportion.

"I do not wish to go deeper into this difficult subject, and only wish to call attention to the fact that in the present evolution of morals, and especially in the large cities, the police alone, even when their organization is of the best, is not under any circumstances sufficient to initiate real progress in this field. The number of prostitutes in the large cities is too great to permit even the majority to be inscribed, and, besides, the reckless enforcement of the police inscriptions is not at present in accord with modern views and would encounter everywhere the greatest difficulties and obstacles. I believe, therefore, as I have already amplified in a lecture given in the winter of 1900, at the Charité, that institutions must be created in which prostitutes may be received for free treatment, and in order to encourage prostitutes to visit these institutions all of those who follow the prescribed regulations and treatment should, *a priori*, be exempt from police inscription.

"In this direction, the German Society for Combating Venereal Diseases has a rich field for labor; but, before closing, permit me to call attention to a danger which can only be guarded against by the most careful advances. It is not

possible, even when most unfounded, to push aside old prejudices and views. When these have arisen from false modesty it is hazardous to throw away all scruples. Too much zeal in this direction may easily cause opposite results, and it is of all things desirable not to alienate the influential portion of the public from the society. Only through cautious and unremittent work of enlightenment can success be achieved in gradually overcoming the obstacles mentioned, and by a persistent endeavor we may attain the goal of limiting the alarming spread of venereal diseases."

What should certainly be done by the United States and Great Britain is for the medical profession of both countries to organize societies for combating venereal diseases. Such a course would certainly lead to an international effort in this direction, and there can be no doubt that much good would result from such combined effort.

Missouri State Medical Association.—The annual meeting of this Association was held May 19, 20, 21 and 22, and was an unusually successful one, the papers read being of a more than usually high character. The following officers were elected: President, J. N. Jackson, Kansas City; Vice Presidents, S. M. Brown, Monroe City; H. W. Latham, Latham; T. E. Potter, St. Joseph; W. S. Thompson, Armstrong; J. C. Rogers, Kansas City; Secretary, C. M. Nicholson, St. Louis; Assistant Secretary, E. J. Goodin, St. Louis; Treasurer, J. F. Welch, Salisbury. A very fine reception was tendered the Association by the members of the St. Louis Medical Society in the Missouri building at the World's Fair grounds. The next meeting will be held at Excelsior Springs in May, 1905.

BOOK REVIEWS.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., assisted by H. R. M. LANDIS, M.D., Vol., II, June, 1904. 8vo. pp. 334. Illustrated. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, \$6.00 per annum.

The present volume of *Progressive Medicine* is certainly a most excellent one and it compares very favorably with any one of its predecessors. The contributors have improved upon their former work and the articles have the appearance of being more comprehensive and finished. The Surgery of the Abdomen, including Hernia is most thoroughly reviewed and commented upon by Dr. William B. Coley. Hernia and the peritoneum receive particular attention, the stomach receiving very full consideration insofar as its surgery is concerned. The surgery of the liver and biliary passages is also thoroughly reviewed and the pancreas receives that share of attention which it deserves. In fact, the progress made during the past year in connection with these subjects is commented upon in a manner both interesting and valuable.

Gynecology is very well handled by Dr. John G. Clark. The uterus, pelvic infection and gonorrhea in women receive each a large share of attention. Among the interesting subjects reviewed is the function of the corpus luteum which, up to the present time, has been an enigma. Diseases of the vulva and vagina fitly close this part. After a careful reading of that portion devoted to pruritus vulvæ we do not find ourselves much nearer to the solution of the difficult problem of curing this distressing affection.

Dr. Alfred Stengel takes up the review of progress made in connection with the blood, diathetic and metabolic diseases, the work done in diseases of the spleen, thyroid gland, and lymphatic system. As would naturally be expected the blood occupies the largest part of this section and justly so, as improvements are being made almost daily in staining methods and the other technical details connected with hemology. Gout and rheumatoid arthritis come in for their share of attention, as well as diabetes and tuberculosis of the lymphatic apparatus. The entire section is a highly truthful one and scientific as well, the work of Dr. Stengel being much above the average.

The part devoted to Ophthalmology, under charge of Dr. Edward Jackson, is rather short but contains much that is useful. Diseases of the conjunctiva, of the cornea and of the ureal tract are considered. Sympathetic disease, diseases of

the optic nerve, of the retina and toxic amblyopious receive their share of attention.

Considering this number of Progressive Medicine and the preceding one, so far as their good qualities are concerned, we are certainly justified in expecting the succeeding issues to be much above the average in which expectation we are certain that we shall not be disappointed.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By PROF. DR. CARL VON NOORDEN. Authorized American Edition, translated under the Direction of Boardman Reed, M.D. Part V. Concerning the effects of Saline Waters (Kissingen, Homburg,) on Metabolism. By Prof. Carl von Noorden and Dr. Carl Dapper, 8vo. pp. 92. [New York: E. B. Treat & Co. 1904. Price 75 cents, net.

This latest part on the diseases of metabolism fully demonstrates the capabilities of its distinguished author and is certainly a valuable contribution to a subject of vital importance to both physicians and to the patients under their care. Whilst the opusculum before us enters into the physiology of salt and saline waters most thoroughly in their relations to normal digestion and to their influence upon the acid secretion of the stomach, the authors have also devoted quite a large amount of attention to their therapeutic effects in disordered conditions of gastric digestion dependant upon troubles of the viscus chiefly concerned.

The clinical observations which are recorded have been supplemented with the most searching examinations carried on with a thoroughness and scientific accuracy which lend added value and certainty to the conclusions which are drawn. Among the most important conclusions at which the authors arrive is, among others, that the ingestion of saline mineral waters does preclude any article of diet that would not be forbidden where they not taken; and, the use of these saline waters does slightly increase the excretion of uric acid thus justifying the use of such waters in the treatment of uric acid retention. This part makes a valuable addition to the Clinical Treatises of von Noorden and we shall await the appearance of the next one with much interest.

Electro-Diagnosis and Electro-Therapeutics. A Guide for practitioners and students. By DR. TOBY COHN. Translated from the second German Edition and edited by FRANCIS A. SCRATCHLEY, M.D. 8vo. pp. 280. With Eight Plates and Thirty-nine Illustrations. [New York and London: Funk & Wagnalls Company. 1904. Price \$2.00.

This is a practical little book, out of the ordinary both in its

merits and its construction. The author has wisely dispensed with a mass of technicalities which are never read and he enters right into his subject in a practical manner. It is this method which has gained such popularity for it in Germany, and Prof. Mendell, the great German authority on neurology has been led to praise it for this very reason. The author has been a very successful teacher and has justly gained the interest and enthusiasm of his students as well as of those of other teachers.

The book is divided into two parts, the first one dealing with electro-diagnosis and the second one with electro-therapeutics. The author has very wisely contented himself with dealing with general principles and not specializing to any extent as this would have led to the writing of a treatise instead of what he intended for a handbook. In the second part of his book the author is advisory rather than pedagogic and this course he has very advisedly adopted. Electro-therapy is in that stage of its development that one needs be rather careful in dealing with the subject as what is regarded as positive today is very apt to be proven, only a surmise tomorrow. The book before us is, on the whole, a safe and reliable guide and will be found of the highest value by all those who wish to consult a work on the subjects with which it deals. We do not hesitate to recommend it to both practitioners and students.

The Closure of Laparotomy Wounds, as practiced in Germany and Austria. Including Detailed Methods and Views communicated by over Fifty Leading Surgeons. Edited and Translated by WALTER H. SWAFFIELD, F.R.C.S. Ed., M.D. Ed. 8vo. pp. 72. [Philadelphia: P. Blakiston's Son & Co. 1904.

This small collection of letters should certainly prove of the highest value to all those surgeons who perform laparotomy. The surgeons, who have written the letters here presented, are men of international reputation and their opinions based upon personal experience are certainly of the highest importance to the operator. Whilst the entire matter is one of minor technique it is none the less valuable, more especially of the fact that, as the editor very aptly puts it, "Surgeons do not *see* operations, they perform them." We are certain that surgeons will read this little book with avidity as it is the details and close attention to minor matters that lead successful operations, especially when they are laparotomies. We can commend this booklet to the careful perusal and study of every operator.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

The Closure of Laparotomy Wounds, as practiced in Germany and Austria. Including Detailed Methods and Views communicated by over Fifty Leading Surgeons. Edited and Translated by Walter H. Swaffield, F.R.C.S. Ed., M.D. Ed., 8vo. pp. 72. [Philadelphia: P. Blakiston's Son & Co. 1904.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., assisted by H. R. M. Landis, M.D. Vol. II. June, 1904. 8vo. pp. 334. Illustrated. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, \$6.00 per annum.

Electro-Diagnosis and Electro-Therapeutics. A Guide for Practitioners and Students. By Dr. Toby Cohn. Translated from the Second German Edition and Edited by Francis A. Scratchley, M.D. 8vo. pp. 280. With Eight Plates and Thirty-nine Illustrations. [New York and London: Funk & Wagnalls Company. 1904. Price, \$2.00.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Prof. Dr. Carl von Noorden. Authorized American Edition, translated under the Direction of Boardman Reed, M.D. Part V. Concerning the Effects of Saline Waters (Kissingen, Homburg) on Metabolism. By Prof. Carl von Noorden and Dr. Carl Dapper. 8vo. pp. 92. [New York: E. B. Treat & Co. 1904. Price, 75 cents, net.

The Sanitarian announced in the June issue made the following announcement: With this issue *The Sanitarian* per se ceases. Beginning with the July issue it is consolidated with the *Popular Science Monthly*. This is a move which will certainly rebound to the benefit of both of these sterling publications but above all to that of their subscribers. We have no doubt that, in its new form, the publication will be one of the best published in its class.

MELANGE.

Illinois State Medical Society.—The Illinois State Medical Society held its annual meeting at Bloomington May 19, 20 and 21 last. The election of officers for the ensuing year resulted as follows: President, William E. Quine, Chicago; First Vice President, H. C. Mitchell, Carbondale; Second Vice President, J. F. Percy, Galesburg; Secretary, Edmund W. Weis, Ottawa; Treasurer, Everett J. Brown, Decatur. Rock Island was chosen as the next place of meeting.

New York and New England Association of Railway Surgeons.—At the last annual meeting of the New York and New England Association of Railway Surgeons held in Nov., 1903, an invitation was officially accepted from the Association of Surgeons to the Pennsylvania Lines to send delegates to the annual meeting of the latter association, to be held at the Southern Hotel, St. Louis, Mo., on Thursday, Sept. 8th, 1904.

If there are any members of the former association who intend visiting St. Louis, during the week of Sept. 8th, they will kindly notify Dr. Geo. Chaffee, Secretary of the Association, at once, so that their names may be placed before the president when he selects the delegates. This is an important matter in our association work and we trust that our members will notify the secretary promptly as requested.

Fifth International Congress of Dermatology, Berlin.—This Congress will take place in Berlin on September 12th, 1904, in the auditory of the Pathological Anatomical Institute of the "Charité." The fee for membership is fixed at 20 marks, which entitles members to the volume of transactions. Subscriptions may be sent to the general secretary (Dr. O. Rosenthal, Sanitätsrat, Berlin W., Potsdamerstr. 121 g.), or to the local secretary. Members may express themselves in English, French, Italian or German. The subjects for discussion will be of two orders—those selected by the committee, and those chosen by the individual members of the Congress. Members contributing papers on other subjects must give notice to the secretary-general before July 1st, 1904. Such papers must not have been published or read before any society before the

opening of the Congress. The debates will be reported in German, but papers in English, French or Italian will be published in these languages. A museum of models, photographs and drawings, histological and bacteriological preparations, will be opened in the rooms of the Congress; another one of instruments and chemicals will be in a special room. The principal subjects for discussion will be: 1—Skin affections occurring in connection with disordered metabolism; 2—Syphilitic affections of the organs of circulation; 3—Epithelioma and its treatment; 4—(a) The position of the spread of leprosy, and the means taken to combat it since the Leprosy Conference in January, 1897; (b) The present position of the doctrine regarding anesthetic leprosy.

Fifteenth International Congress of Medicine—Lisbon, Portugal, April, 1906.—We have received the first number of the Journal of the Fifteenth International Congress of Medicine, that will take place in Lisbon on the 19th-26th of April, 1906. This number contains the statutes of the Congress, the organization of the sections and of the national committees of the different nations. One must remark in the statute the second article, that only admits in the Congress, beyond doctors, scientific men presented by the national or Portuguese committees. The contribution is twenty-five francs or twenty marks or one pound sterling. The work of the Congress is distributed in seventeen sections. 1—Anatomy (descriptive and compared anatomy, anthropology, embryology, histology); 2—Physiology; 3—General pathology, bacteriology and pathological anatomy; 4—Therapeutics and pharmacology; 5—Medicine; 6—Pediatry; 7—Neurology, psychiatry and criminal anthropology; 8—Dermatology and syphilography; 9—Surgery; 10—Medicine and surgery of the urinary organs; 11—Ophthalmology; 12—Laryngology, rhinology and stomatology; 13—Obstetrics and gynecology; 14—Hygiene and epidemiology; 15—Military medicine; 16—Legal medicine; 17—Colonial and naval medicine. The executive committee of the Congress has the intention to print, before the re-union, all the official reports; it is necessary that they be given to the general secretary before the 30th of September, 1905. For the optional communications it is necessary that they should be given

before the 31st of December, 1905, if the authors want the conclusions printed before the opening of the Congress. The official language is the French. In the general assemblies as in the sections, but English, German and French may be used. We see that the committee of the Congress has excluded the Portuguese from the language permitted; this has only been done with the intention of diminishing the number of languages spoken; there can be no jealousy when the host begins by sacrificing himself. The president of the committee of organization is Dr. M. da Costa Alemão; the general secretary is Dr. Miguel Bombarda; all the adhesions must be addressed to this doctor (Hospital de Rilhafoles, Lisbon.) Dr. John H. Musser of Philadelphia has been appointed to organize the American committee. We note that among the countries not represented are France, Germany, Italy and Russia.

Objectionable Medical Advertisements to be Excluded from Mails.—The Post-Office Department has determined to rid the mails of objectionable and offensive advertisements. Those advertisements which are of an offensive nature will be excluded for violation of law as violating decency, and those which advertise fake preparations will be excluded on the ground of fraud on the public.—(*Jour. Am. Med. Ass.*) All drugs and nostrums will be referred to the Department of Agriculture for analysis to determine the sincerity of their medical claims, and the data in all cases will be finally referred to the Law Department for final action. The action in this particular has received the approval and has the co-operation of the American Newspaper Publishers' Association and a large number of medical men and scientists. The attorney for the Post-Office Department has held that any contract for advertisements of such objectionable matters is void when the Post-Office Department has passed adversely on the character of the advertisement. The decision will materially assist newspapers and publishing houses against suits for failure of contract to publish such advertisements when the Post-Office Department declares the matter objectionable and excludes it from the mail. The law in the matter is very broad, and is herewith appended :

UNMAILABLE MATTER.

“Every obscene, lewd, or lascivious book, pamphlet, picture,

paper, letter, writing, print, or other publication of an indecent character, and every article or thing designed or intended for the prevention of conception or procuring of abortion, and every article or thing intended or adapted for any indecent or immoral use, and every written or printed card, letter, circular, book, pamphlet, advertisement or notice of any kind giving information, directly or indirectly, where or how, or of whom, or by what means any of the hereinbefore mentioned matters, articles or things may be obtained or made, whether sealed as first-class matter or not, are hereby declared to be non-mailable matter, and shall not be conveyed in the mails nor delivered from any post-office nor by any letter-carrier; and any person who shall knowingly deposit, or cause to be deposited, for mailing or delivery, anything declared by this section to be non mailable matter, and any person who shall knowingly take the same, or cause the same to be taken, from the mails for the purpose of circulating or disposing of, or of aiding in the circulation or disposition of the same shall, for each and every offense, be fined on conviction thereof not more than five thousand dollars, or imprisoned at hard labor not more than five years, or both, at the discretion of the court. And all offenses committed under the section of which this is amendatory, prior to the approval of this act, may be prosecuted and punished under the same in the same manner and with the same effect as if this act had not been passed: Provided, That nothing in this act shall authorize any person to open any letter or sealed matter of the first class not addressed to himself."

In a letter to our correspondent the first assistant postmaster-general says that "the question of admission to the mails of newspapers containing medical advertisements treating of private and disgusting diseases, and offering for sale medicines designed for unlawful purposes, has already been considered by the department, and it has been decided that such advertisements are forbidden circulation in the mails by the act of Congress which declares to be unmailable 'any print or other publication of an indecent character, and every article or thing designed or intended for the prevention of conception.' On presentation to the department of any advertisement such as above described, the same will be duly considered and appropriate action taken."

MISCELLANEOUS NOTES.

First Inception of Coca Wine.—Coincident with the earliest scientific presentation in Europe, about 1859, of the physiological properties of Coca by Dr. Mantegazza, and of the investigation of its chemical constituents by Professors Woehler and Niemann, and before the alkaloid cocaine had been described, Mr. Angelo Mariani, a pharmaceutical chemist, of Paris, France, prepared a wine from Coca leaves which represented their full restorative qualities as employed in the Andes. This tonic wine has ever since borne his name, and is known throughout the world by the proprietary title Vin Mariani. During nearly half a century this preparation of Coca has been maintained of uniform excellence, with a distinctive quality that its numerous imitators have failed to approach. The reason for this must be obvious to the thoughtful. With the advance of improvements in various pharmaceutical processes, Mr. Mariani has adapted to his extensive manufacturing plant every means that might tend to keep the details of his product near to the high standard of his first ideal. This was the more earnestly desired because of the accumulated encouragement of thousands of practitioners who have endorsed Vin Mariani as a tonic of sterling worth.—*The Coca Leaf*, November, 1902.

Good and Seasonable.—A word about some remedial preparations which the busy practitioner will find always useful, particularly at this season of the year, will no doubt be of interest. First, we will mention the old time-tried antikamnia and salol tablet, so useful during the hot weather, when even the "grown folks" load up their stomachs with the first offerings of the season. Hare says: "Salol renders the intestinal canal antiseptic and is the most valued drug in intestinal affections." The anodyne properties of antikamnia in connection with salol render this tablet very useful in dysentery, indigestion, cholera morbus, diarrhoea, colic, and all conditions due to intestinal fermentation. Then the "triple alliance" remedy so well and favorably known by its self explanatory title, namely: "Laxative Antikamnia and Quinine Tablets." To reduce fever, quiet pain, and at the same time administer a gentle tonic-laxative, is to accomplish a great deal with a single tablet. Among the many diseases and affections which call for such a combination, we might mention coryza, coughs and summer

colds, chills and fever, biliousness, dengue and malaria with their general discomfort and great debility.

We cannot overlook our old friend, the antikamnia and codeine tablet. The efficacy of this tablet in neuroses of the larynx is well known, but do all of our Doctor friends know that it is especially useful in dysmenorrhoea, utero-ovarian pain and pain in general caused by suppressed or irregular menses? This tablet controls the pain of these disorders in the shortest time and by the most natural and economic method. The synergetic action of these drugs is ideal, for not only are their sedative and analgesic properties unsurpassed, but they are followed by no unpleasant after-effects.

Good Effects of Dermapurine.—

I am using the samples you sent me with the happiest results.

N. A. MCCOY, M.D., Jackson, Tenn.

Pueblo, Colo., Dec. 20, 1900.

DERMA REMEDY CO.,

St. Louis, Mo.

Gentlemen :—Some months ago you sent me a bottle of Dermapurine and a cake of Dermapurine Soap. I used the samples in a case of psoriasis and a case of dandruff with great success. I consider Dermapurine a fine remedy.

I am, yours truly,

C. B. CAHUSAC, M.D.

We shall continue our good words, as your Dermapurine Soap pleases us more than any other we have tried, and we have tried many.

Success to you.

Vigorously yours,

EDWARD B. WARMAN.

—*Editor of the Health Department of the Ladies' Home Journal; Author of "Scientific Physical Training," "The Voice," "Philosophy of Expression," etc.*

I find Dermapurine an excellent remedy for scalp troubles; in fact, the best I have ever used. Also good for Eczema. I expect to use it in the future.

J. M. J. MANNING, M.D., Almo, Ky.

I like Dermapurine very much—gave good results.

J. B. MINER, M.D.

Putrefactive Processes.—As an antiferment, to correct disorders of digestion, and to counteract the intestinal putrefactive processes in the summer diarrheas of children, Listerine possesses great advantage over other antiseptics in that it may be administered freely, being non-toxic, non-irritant and non-escharotic: furthermore, its genial compatibility with syrups, elixers and other standard remedies of the *Materia Medica*, renders it an acceptable and efficient agent

in the treatment of diseases produced by the fermentation of food, the decomposition of organic matter, the endo-development of fetid gases, and the presence or attack of low forms of microzoic life.

An interesting pamphlet relating to the treatment of diseases of this character may be had upon application to the manufacturers of>Listerine, Lambert Pharmacal Co., Saint Louis.

Enterocolitis and Cholera Infantum.—Cleanse the intestinal tract with calomel and a saline or castor oil. Prescribe a suitable diet easily digested and non-irritating. Irrigate the rectum and colon at suitable intervals with normal salt solution or some mild antiseptic, using for the purpose a soft rubber catheter or colon tube.

Instead of opiates, which lock up the secretions and thereby favor auto-intoxication, relieve the muscular rigidity and the excruciating pain which is such a drain upon the vital forces, by the use of Antiphlogistine as hot as can be borne to the entire abdominal walls and covered with absorbent cotton and a compress. If the patient is not too far gone, the effect will be astonishing. The little sufferer, who until now has been tossing in agony and restlessness, with drawn features, will in most cases quickly become quiet; the drawn look will leave the face and a restful slumber will often supervene and start him upon the road to recovery.

The explanation of this, in part, is not far to seek. The heat and moisture combined with Antiphlogistine's well known hygroscopic properties, directly soothe the inflamed parts, reflexly contracting the visceral bloodvessels and relieving their engorgement. The tension of the muscular and nervous systems is further relieved by the action of Antiphlogistine through the solar plexus thus adding to and emphasizing its local effects upon the inflamed intestines.

Blood Impoverishment.—In meeting that condition of the system embraced in the above headlines, is it not true that our first thought, and that to which our instinct naturally leads us, is iron; but viewed from the standpoint of now accepted scientific facts, is this not looking at but one phase of the question? That there is a deficiency of iron in the blood in most forms of anemia is, of course, indisputable; and to endeavor to supply this lack by the administration of iron seems but a common sense procedure. This practice would be sufficient if anemia were in reality, nothing more than a condition of iron deficiency; but modern physicians know that the real underlying causative factor is a disturbance of the complicated processes of nutrition and metabolism, and that iron poverty is but one manifestation of this disorder. Sufficient proof of this fact has been presented to every physician when he has observed how anemic conditions persist in spite of the long continued administration of iron. Here, then, iron must be supplemented by such remedies as have the ability to awaken the depressed nutritive and metabolic processes.

To invigorate, to rekindle nervous force, to revitalize all functions, and thereby bring about a condition of systemic vigor, of which blood-enrichment is necessarily a feature, the addition of Manganese with Iron is desirable. In Pepto-Mangan, Iron and Manganese was first brought to the attention of the profession by Dr. Gude, Chemist, and this preparation is found to be one of the best therapeutic resources of the present-day physician, and when combined with such other remedies as meet the indication, such as we have spoken of, forms at once a therapeutic arsenal whose fortress is impregnable.—Editorial in *Medical Summary*, March, 1904.

Aletris Cordial (Rio) in Hysteria.—Where hysteria is the result of uterine troubles, aletris cordial (Rio), combined with celerina, is an excellent remedy.

Sanmetto in Nocturnal Emissions and Prostatic and Urethral Troubles. I have been using Sanmetto ever since it has been before the medical profession. Sanmetto, as prepared only by Od Chem. Co., New York, has never disappointed me, but substitutes have. The scope of usefulness of Sanmetto is much more, in my humble opinion, than has ever been claimed for it. In nocturnal emissions, resulting from self-abuse, I have found Sanmetto very nearly a specific, as well as in all prostatic affections. For a number of years Sanmetto has been my sheet anchor in gonorrheal troubles. It is one of the proprietary medicines that we could not well do without.

Whitewell, Tenn.

L. L. JANEWAY, M.D.

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ORIGINAL COMMUNICATIONS.

SYMPOSIUM ON TUBERCULOSIS.

HISTORY-TAKING IN CASES OF PULMONARY TUBERCULOSIS.*

BY CHARLES J. HATFIELD, A.M., M.D., PHILADELPHIA, PA.

In the discussion this evening, we are to assume that the patient comes to the examining physician with some indication of tuberculosis infection. This indication is to be verified and explained; a diagnosis is to be made, and the stage of the disease determined; so that a prognosis may be given and treatment instituted. A careful record of related facts is necessary in the study of any serious illness; and in no disease is this record of greater importance and interest than in tuberculosis.

The records of age, color, sex, social condition, nativity (ancestral and personal) and place of residence are naturally made first. Each of these data has an obvious diagnostic or prognostic value, either in itself or when considered in connection with some significant symptom. Thus a child or person in middle life will have a more favorable prognosis than will a young adult or a patient debilitated by age; a woman will present various forms of tuberculosis lesions, *e. g.*, those affecting the uterus and its appendages, which require special investigation; the negro in America is peculiarly susceptible to the disease, and exhibits a power of resistance considerably less than that of the white man; a married patient offers problems in the management of the case quite different from those of the unmarried; a native American is usually much better able to

*Read before the Philadelphia County Medical Society, May 11, 1904.

order his life for health and happiness than is a foreign-born immigrant; and the knowledge of the place of residence, whether healthy or the reverse, will aid materially in prescribing for a patient.

With the questions as to occupation, family history, habits of life and previous diseases, we enter upon a most interesting field of study, where we may hope to discover the actual exposure to contagion, or at least circumstances predisposing to the disease. It is certainly a gratification to be able to point to some definite association in the history and say with a certainty that satisfies at least yourself: "There the disease was contracted!" The effect of occupation is a most important study. The German authorities pronounce it, when a wage-earner is under consideration, of more value than the family history. In this investigation, it is by no means sufficient to know only the present calling, for a fairly large percentage of patients, having been previously warned that they are "threatened with lung trouble," have in consequence secured positions at out-door work, as drivers or motormen; whereas, formerly they may have been tailors or cigarmakers. A safe rule is one suggested by a colleague, who is in the habit of making a complete record of all the occupations successively engaged in, and the time spent in each, since school days. In the list of significant occupations we can include all those which necessitate a sedentary life in crowded workrooms, with the possibility of bad ventilation, uncleanness and dust. In one clinic at the Henry Phipps Institute during the past year, of 234 cases of tuberculosis, there were twenty-three tailors, nineteen mill-hands (operators upon machines), nine cigarmakers, six weavers, six seamstresses and six clerks—these six occupations supplying almost thirty per cent of the cases treated.

In the family history, we find most frequently perhaps evidence of exposure to contagion. We should have a record of the age and health of each living member of the preceding, immediate and succeeding generations. One is not infrequently able to trace infection to some near relative who has been coughing and expectorating for years, who has a chronic form of the disease, which has never been recognized, and who may live long after the victims of his ignorance or carelessness

have been buried. The record of family deaths, with the ages of death, the fatal illnesses and the dates of death, is still more prolific of interesting facts. In drawing our conclusions, however, we must remember that all tubercle bacilli, even the most virulent forms, lose their vitality in about six months, if we are to accept Cornet's statement based upon Kitasato's experiment. Therefore, if we are to establish a connection between the condition of our patient and the disease causing the death of a relative, we must be sure that the exposure was either before the death or very soon after. In cases in which there is obscurity as to the source of contagion, careful inquiry as to the health of the more remote relatives will often be profitable. When the patient is married, the health of the consort and the consort's family is of interest and importance. A number of cases can be gathered from the literature of tuberculosis, in which a husband or wife suffering from a chronic form of the disease, before succumbing to it, has infected and buried two or more successive consorts.

The question of house infection will naturally be considered in connection with the family history. The fact that tuberculosis is a house disease has been conclusively demonstrated. Therefore, a careful questioning of the patient as to the houses he has occupied during the period of possible infection, together with the health and character of the previous inmates, is often productive of definite results.

The personal habits of a patient have considerable weight in fixing the time and manner of contagion. It is generally admitted that any vicious mode of life, which consumes vital powers and lessens tissue resistance, is predisposing to the disease. Alcoholism, for instance, certainly produces a fertile soil for any infection, and perhaps most frequently for the tubercle bacillus.

When we come to consider the history of previous diseases, we are getting close to the first manifestations of specific activity. When the patient gives a history of a comparatively recent attack of malaria or typhoid fever or pleurisy or pneumonia or influenza, from the effects of which he has never fully recovered, he may be telling only of the acute illness which left him with a weakened system, an easy prey of tuberculous infection.

How frequently, however, we can say, with almost absolute certainty, that the so-called malaria, with its fevers, sweats and slight bronchial irritation, was an acute manifestation of tuberculosis. This mistake in diagnosis is the one most frequently met with in clinics devoted to tuberculous cases.

The same statement is true to a less degree of the history of a recent attack of typhoid fever, where again the fever, prostration, digestive disturbances and respiratory symptoms have been tuberculous; of pleurisy, which, when primary, is very frequently tuberculous; of pneumonia, with its almost identical clinical picture; and of influenza, that convenient term for any respiratory affection not easily classified. Other diseases which may be of especial interest in the previous history are diabetes, syphilis, gout and rheumatism; and, in childhood, measles, pertussis, scarlatina and diphtheria. The record of traumatism, especially such as would injure the thorax or cause long confinement to the bed or room, is often significant.

When we reach this point in our investigation, we are in a position to estimate, with a fair prospect of success, the approximate duration of the disease. If we have a definite source of infection, with a history of symptoms beginning within a few months after the period of contact, the task is easy. We must always remember the extreme chronicity of the disease, and must not hesitate to go back a decade or more in order to find the source whence the sequence of symptoms originated. In this attempt to fix the probable duration of disease, we can hope for no direct assistance from the patient, as his idea of the origin will rarely include more than the beginning of the present acute exacerbation. We must bear in mind, moreover, that the determination of duration is going to affect our prognosis. The fact cannot be disputed that patients who have had tuberculosis for a long time, and who show only moderate involvement, respond to treatment better than do the more rapidly advancing cases. Whether this can be attributed to superior strength of constitution or to an acquired immunity it is impossible to say, although the trend of modern investigation seems to point to the latter as the correct view.

In considering the subjective symptoms, we should first record the time when the first sign became manifest to the patient. Usually a very careful inquiry must here be made, as the

patient will easily overlook a gradual loss of weight or strength or a slight morning cough with expectoration. Next, hemoptysis, whether slight or copious, and when first apparent must be noted. If pain is present, its location and character are of interest. The character of the cough, whether slight or excessive, worse night or day, should be recorded; also the amount, character and color of the sputum. Almost every patient will complain of some dyspnea, slight or marked; and we should make note of how this dyspnea is produced, whether only at night, and in paroxysms (asthma), or when lying down (cardiac disease); whether it is continuous, or appears only on exertion. Is hoarseness present? If so, is it persistent or temporary? The presence of chills, night sweats and edema should be noted.

The condition of the gastrointestinal tract should be carefully investigated, for upon its integrity and efficiency we must largely depend in the modern treatment of tuberculosis. The appetite, the condition of the stomach, whether any dyspepsia or nausea is present, the condition of the bowels, where looseness may possibly indicate intestinal involvement—all these inquiries and records are of vital importance. If the patient is a woman, the periodicity and character of the menstrual flow, or its failure to appear, should be noted. The presence of leukorrhea and its duration is also a matter of interest, because of the theory held by some of our prominent specialists to the effect that a leukorrhea is often indicative of a primary tuberculosis of the uterus or the tubes. Finally, of the subjective facts, we must inquire concerning the previous weight of the patient, recording his best weight and its date, the average weight in health, and the lowest weight since the beginning of the illness. A loss of one-third of the highest weight recorded is a basis for the gravest prognosis.

It is not possible in the scope of this paper to speak in detail of the recording of all the objective symptoms, the results of examination. It is of vital importance, of course, to keep records of the weight, pulse, temperature and respiration for each visit, as these symptoms are the best guides in prognosis and treatment.

It may be said that in an outline for history-taking such as has been given, there are entirely too many details for a prac-

tical man, who wishes to make a short cut in his diagnosis. We must remember, however, that careful study of every case of tuberculosis is of importance in the great struggle against the disease and the assistance of every man is needed. Moreover, with a system carefully marked out, a complete history of any case can be made in a half hour.

The outline followed in this paper is in general the one adopted and now in process of development at the Henry Phipps Institute.

THE DIAGNOSIS OF INCIPIENT PULMONARY TUBERCULOSIS.*

BY GEORGE WILLIAM NORRIS, A.B., M.D., PHILADELPHIA, PA.

So much has already been aptly said and well written upon the diagnosis of incipient pulmonary tuberculosis, that I can hardly hope to bring forward any new or original thoughts on the subject. I shall try, however, to emphasize some facts which have been indubitably proved, but which are at present inadequately recognized.

Unfortunately the onset of tuberculosis is accompanied by such slight symptoms, that when the patient presents himself for treatment, several months have usually elapsed since the implantation of the tubercle bacillus first occurred; but a recognition of the disease even at this time is, as a rule, sufficiently early to justify the expectation of a cure.

The most common symptoms of pulmonary tuberculosis are: loss of bodily weight and strength, with failure of appetite and a tendency to become easily fatigued—a symptom complex which is generally summed up by the expression “run down.” It is a safe axiom to assume that every hemoptysis is tuberculous in origin until proved otherwise; and a similar rule may be laid down for an attack of bronchitis, which without evident cause lasts more than six or seven weeks. A mode of onset which is fairly common, but by no means generally recognized, is that of pain and stiffness in the joints. In these cases the lungs are often not examined, and the patient treated with various antirheumatic remedies without benefit. Observation is teaching us that quite frequently chronic arthritis is of tuber-

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culous origin; and certainly arthralgic pains and peripheral neuritis are very common in tuberculosis of the lungs, as are also slight pain in the shoulders and back, and a vague sense of oppression or discomfort in the thorax. Distinct pain in the chest, due to a pleuritis, is usually not an especially early manifestation; neither are chills, fever or night sweats, at least not when these reach sufficient proportions to be complained of by the patient. Slight fever, however, of which the patient is unconscious, especially if recurring regularly towards evening or after exertion, is very suggestive. This pyrexia is, as a rule, very slight in amount; being perhaps only one-half or one degree above the normal, on which account it is often disregarded. Night sweats, too, are often trivial; they may be confined to the axillæ, and be attributed to an abundance of bed-clothes. Vasomotor paresis and cardiac erethism are frequently encountered; the former manifesting itself by transient erythema and sudation; the latter by tachycardia, which is still more increased by slight exertion or mental excitement: this acceleration of the pulse accompanied by dyspnea on exertion is very characteristic. Prolonged or frequent hoarseness should always be carefully investigated, as should also dyspepsia, prolonged diarrhea or other gastrointestinal symptoms. Cessation of the menses in women does not usually occur until the disease is considerably advanced. It should always be borne in mind that pulmonary tuberculosis—especially when the infection is a simple one—may not only exist, but even be well advanced, without the patient having been conscious of cough. All attacks of pleurisy should be treated as "suspects." A large proportion of these cases subsequently develop tuberculosis of the lungs, and have a similiar origin. If effusion is present the aspirated fluid may be shown to contain tubercle bacilli, this being most accurately demonstrable by animal inoculation.

Careful questioning in regard to the patient's personal and family history will often beget information of the most useful character. In about two-thirds of the cases the source of the infection can thus be learned and valuable data obtained as to the amount of time which has elapsed since the primary implantation took place; from which deductions may be drawn regarding the course which the disease has, and probably will

run. A second attack of supposed typhoid fever or an unusually protracted seige of influenza will often indicate the time when the tubercle bacillus first became pathologically virulent.

Attention has often been called to the habitus phthisicus—a flattened, elongated chest with prominent clavicles and scapulae, glistening bluish-white sclerae; dry, fine, brittle, lusterless hair; sunken or hectic cheeks, a sharp nose, mydriasis, a red line on the gums, and other well-known signs. Any or all of these may be present—though usually not in early cases—and may be of help in making a diagnosis, but their absence should never throw us off our guard. Distinct tuberculous lesions are often found in apparently well-nourished and robust individuals. The presence of slight spinal curvature, or of scars on the neck, the result of lymphadenitis in early life, are much more important findings. Physiologic sufficiency of the thorax is more to be looked for than mere anatomic configuration.

PHYSICAL SIGNS.

At the very outset I should like to emphasize the necessity, in every case, of making an entire and absolute exposure of the chest when making a physical examination. It is often stated that the majority of heart lesions may be correctly diagnosed by inspection and palpitation; but in no phase of internal diagnosis can more be learned from inspection alone than in pulmonary tuberculosis. Two reasons why this disease is so frequently overlooked are, that the lungs are examined through the clothing and that the stethoscope is not employed. The latter is no less essential than the former; not only for careful localization, but in order to auscult certain regions at all; notably the supraclavicular fossae, and the axillary apices—two of the most important regions.

Inspection of the chest should be made under good illumination, and care should be taken to have the shoulders lowered and the muscles of the shoulder girdle relaxed. By standing alternately at a little distance in front of the patient, and again by looking over the shoulders from behind, changes in the respiratory movements can be readily detected. On the affected side diminished or delayed expansion will be found, perhaps also restricted diaphragmatic excursion, the latter being due either to pain or to adhesions of the pleura. Supra

and infraclavicular depression, or subclavicular flattening will often indicate the location of the lesion. Inequality of thoracic expansion can be very readily determined by means of a tape measure in which the ascending scale of inches is laid off in each direction from the middle. Distinctly restricted movement of one side of the chest without evident skeletal deformity should make us very strongly suspect tuberculosis.

Palpation is perhaps the least valuable of the four routine methods of investigation; doubtless because a thickened pleura vitiates the physical signs as evinced by fremitus. As a rule, however, corroborating evidence to that obtained by inspection will be produced, especially in regard to the amount and relative extent of the expansion.

Percussion usually elicits a change of resonance which may range from slight impairment to absolute flatness; the note depending largely on the character, extent and depth of the pulmonary involvement, as well as upon the amount of pleural thickening or compensatory emphysema present. The apices of the lungs above the clavicles being near the surface should always be lightly percussed. Deep-seated lung involvement requires forcible percussion to elicit changes in resonance. The use of the fingers alone in percussing is to be preferred to artificial pleximeters owing to the very valuable sense of resistance which is thus retained; at times, however, slight changes in pitch can be more easily detected by the use of an ivory instrument.

A careful comparison of corresponding areas should always be made, bearing in mind that under normal conditions the resonance is usually more marked in the right chest. If percussing the anterior surface, the patient's arms should hang laxly at the sides; if posteriorly, the hands should be placed on the opposite deltoids; if in the axillary line, they should rest upon the head, the elbows being thrown slightly backwards. As far as possible muscular relaxation should be attained, and the patient's head be held in the same planes as the body.

Percussion over a tuberculous area frequently produces pain, especially if there is marked pleural involvement; when performed over a cavity it is often productive of cough and expectoration; the latter phenomena when occurring is, I think,

very suggestive of a vomica. If the lesion is deep-seated and compensatory emphysema exists, hyperresonance may replace impairment. Abrams especially insists that tympany and not dulness is the note most often encountered in early tuberculosis.

In the accurate differentiation of the percussion resonance, the personal equation enters largely into account. An ear which readily analyses musical notes will always be more expert in pulmonary diagnosis, other things being equal; but in every case special education and practice are necessary. It is not enough to be able to distinguish changes in sound; we must also be able to recognize the amount of their deviation from the normal, and to interpret their pathologic import, if such they have. It is a safe plan to begin percussing over a part of the lung which we know to be healthy, and gradually approach the part which we suspect to be diseased. In this way we refresh our memory as to what true resonance is, or at least measure the extent to which it exists in the individual in question.

Auscultation reveals the most important information. Before resorting to it, however, it is well to spend some time in instructing the patient to breathe properly, "a little deeper than naturally;" and seeing to it that he does so, before listening to the chest. This procedure is very time-saving in the end, and eliminates many possible sources of error. If the patient's neck is craned forward or backward, and in some cases even in a straight position, raucous, throaty sounds will be transmitted to the chest which may closely simulate bronchial breathing, and be the cause of much confusion. Stenosis of the trachea or pressure upon the bronchi, from aneurysm, tumor or enlarged bronchial glands, may produce a similar result. These cases are differentiable from tuberculosis through the equal bilateral quality of the sounds produced and by the absence of changes in resonance. Expiration should be passive, no voluntary expiratory effort being made. Patients suffering from any nasal obstruction should breathe through the oral cavity.

The entire chest must of course be carefully ausculted, but especial attention should be paid to the apices above and below the clavicles, anteriorly; the supraspinous fossæ and

the areas which underlie the inferior extremities of the scapulæ, posteriorly. The latter areas correspond to the fissure between the upper and lower lobes. If rales are absent, the patient should be made to cough forcibly and take deeper inspirations, a procedure which will often cause doubtful findings to become clear pathologic manifestations. In the early stages of pulmonary tuberculosis glaring physical signs must not be expected. Expiration may be but slightly prolonged, or perhaps only roughened; in some instances, an unduly suppressed and indistinct respiratory murmur is equally indicative of disease. Bronchial breathing does not occur until marked infiltration has taken place. Fine, hair-like, crepitant rales; heard especially at the end of inspiration, localized to a certain area, though not necessarily the apex, are very characteristic of tuberculosis; but often much coarser rales may take their place or be commingled with them. There is much truth in the hackneyed adage that "unilateral catarrh is not catarrh." Due but not too much allowance must always be made for the bronchovesicular respiration which is normally encountered, especially in women, posteriorly over the bronchi; and anteriorly at the second right costosternal articulation. Tuberculosis foci in the latter location have to be determined by the percussion changes, the presence of rales, the data obtained by inspection, etc. The normal breath-sounds at the right apex, similarly to the resonance, are more intense than on the opposite side. Pleural friction sounds are not infrequently heard over affected areas, coincidently with rales; they are usually low in pitch, rough and grating in character, unchanged by coughing, intensified by deep breathing, and remain localized for extended periods of time. Such frictions may be simulated by the sounds which the scapulæ sometimes produce in rubbing over the dorsal fascia; the latter, however, can be made to disappear by changing the position of the shoulder blades.

As has been already stated, great care should be exercised to secure complete relaxation of the thoracic and dorsal muscles, because the sounds produced by contracting muscle fibers may considerably modify the character of the respiratory murmur, and as a patient who is straining or even exerting his voluntary muscles will not breathe in a soft, natural and effortless manner.

But little attention should be paid to cog-wheel respiration. This phenomenon may occur from irregular contractions of the respiratory muscles, and is very common in excited or neurotic patients. It is noted in many nontuberculous cases, especially anteriorly near the heart, and in lung areas overlying the large vessels. Subclavian murmurs are frequently observed; they usually appear or become intensified toward the end of a deep inspiration, and are apparently due to constriction of the vessels by consolidated lung tissue or adhesions. When heard they are perhaps suggestive, but by no means pathognomonic of tuberculosis. Accentuation of the pulmonary second sound is a very constant finding, even in early cases. Cardiac murmurs are by no means rare; they may be due to anemia, relative insufficiency of the valves or otherwise abnormal heart action. Distinct organic valvular lesions, while by no means excluding tuberculosis as formerly supposed, are not very frequent complications. Cardiorespiratory murmurs are often met with; they possess neither diagnostic nor clinical significance.

The detection of tubercle bacilli in the sputum is satisfactory evidence as to the etiology of the condition; their absence, however, is no disproof of it. The sputum of advanced cases, with well-marked evidences of cavity formation, often has to be examined a number of times before tubercle bacilli can be demonstrated; and in incipient cases often twenty or thirty examinations are required before a positive result can be obtained. Truly incipient cases have, as a rule, no expectoration whatsoever, the cough itself being often unnoticed by the patient. The prevalent tendency to defer the diagnosis of tuberculosis until bacilli have been found in the expectoration is most unfortunate for the patient and often humiliating to the physician. No hesitancy exists in telling a patient suffering from cardiac or renal lesions of his true condition and insisting upon hygienic reformation; but the tuberculous individual, who harbors a far more curable disease than either of these, is allowed to remain in a benighted state regarding his malady until a physical breakdown brings to his own realization the fact that he is afflicted with more than a transient process. The symptoms, clinical history and physical signs are in many cases sufficient to justify a diagnosis of pulmonary tuberculosis, without an examination of the sputum at all; and until this

fact is more generally recognized, the future, like the past, will witness the transport of a remediable incipency to a hopeless advancement before the diagnosis is pronounced. The demonstration of tubercle bacilli in the sputum may be considerably abetted by centrifugation, or by the more recently introduced method of inoscopy — which consists of liquefaction of the sputum by a process of digestion before centrifugation. Animal inoculation, when feasible, is also of assistance, but requires time and especial facilities. In the light of modern belief, the infrequency of tubercle bacilli in early cases is easily explained. Nearly all investigation is tending to prove that this micro-organism is never inhaled directly into the air-vesicles, and that pulmonary infection when present has always been preceded by an infection of the bronchial lymph nodes; the portal of entrance having been the bronchial or intestinal mucous membrane, the tonsils, etc. This being the case, the bacilli have literally to come through the lungs before they appear in the expectoration, a process which does not occur until necrosis of the pulmonary tissue has taken place. Large numbers of bacilli unless continuously found, are nor necessarily an indication that the disease is far advanced. They may be due to the breaking down of a small nodule, which happened to occur at the time when the sputum was collected for examination.

The tuberculin reaction is a useful adjuvant in diagnosis, to be held in reserve. While not infallible as a positive test, its absence precludes the presence of tuberculosis. The value of serum diagnosis is still *sub judice*. The X-ray, laryngeal mirror, and occasionally the ophthalmoscope, have been of distinct value in diagnosis, but unfortunately expert testimony is required to make the evidence thus obtained of material weight.

DIFFERENTIAL DIAGNOSIS.

The conditions which most closely simulate incipient pulmonary tuberculosis are syphilis, influenza and mitral disease, especially slight grades of stenosis; healed tuberculosis lesions, simple streptococcic infections of the lung, and nontubercular fibrosis.

Much diversity of opinion exists as to the frequency with which *syphilis* affects the pulmonary tissue, but prevalent belief is to the effect that this is more commonly the case than

is generally supposed. Aside from a history of this infection, localized evidences such as cutaneous scars or other tertiary lesions may be present. Syphilis usually begins at the hilum of the lung. It may spread upward, but more usually affects the lower lobes. Tuberculosis begins just below the apex, and generally affects the subjacent lobe before spreading to the opposite side. In syphilis there is, as a rule, equal bilateral consolidation, often without rales; emaciation, expectoration and fever are less marked, hemoptysis is more rare. The patient seems much less ill than would be the case from an equal amount of tuberculous pulmonary involvement. The tuberculin test is of no value in these cases because syphilitic patients sometimes give a positive reaction. A laryngeal examination may be decisive if this organ is involved; but generally the diagnosis hinges upon the sputum examination and the therapeutic test — tuberculous patients being nearly always made worse by the administration of mercurials and potassium iodid.

Influenza and pulmonary tuberculosis are more frequently confused; but here the protracted course of the latter, the presence of a slight regular evening rise of temperature, night sweats, hemoptysis, progressive emaciation, accentuation of the pulmonary second sound, localization of the physical signs and tubercle bacilli in the sputum are features of differentiation. As has already been stated, many cases of supposed influenza are acute exacerbations of pulmonary tuberculosis. The mere recurrence of such attacks, especially if subsequently the health of the individual remains impaired, should make us very suspicious of tuberculosis. If a diffuse bronchitis coexists it is often necessary to defer a positive diagnosis until the latter has cleared up.

Slight grades of *mitral stenosis* may render the diagnosis for a considerable time uncertain. In either condition we may have a rapid pulse, cough, expectoration, rales, easily provoked dyspnea and fatigue, gastric symptoms, accentuation of the pulmonary second sound, hemoptysis, etc. But here again cyanosis with marked right-sided cardiac enlargement, diffuse bilateral involvement of the lungs, most marked at the bases, without pyrexia, as well as the absence of night sweats, are evidence in favor of a heart lesion. The blood pressure in mitral

stenosis is apt to be slightly above the normal, while in tuberculosis arterial hypotension frequently exists. Precordial thrills are commonly encountered in the last named disease, owing to general emaciation or to retraction of the lung; but when unaccompanied by mitral stenosis they are not presystolic in time.

Healed tuberculous lesions, if complicated by an acute infection such as bronchitis, require more or less prolonged observation, frequent examinations, and careful consideration of the anamnesis, subjective symptoms, and general health.

Nontuberculous fibrosis is to be recognized by its equal bilateral character, absence of fever, hemoptysis, tachycardia, night sweats, etc., but especially by the disproportion between the amount of lung tissue involved and the apparent illness of the patient, as well as by the absence of tubercle bacilli.

Some of the most puzzling cases are those which occur in old people, in whom the respiratory sounds are suppressed, or in those who are known to have emphysema, with perhaps cardiac and renal degeneration as well, in which the question arises as to the additional presence of an active or a healed tuberculosis lesion. Such cases necessitate repeated physical examinations and the employment of all available diagnostic means. Fortunately the diagnosis in these instances is of less moment than when occurring in patients of an earlier age; inasmuch as the tuberculous process is apt to run a slow and protracted course, so that under reasonable hygienic conditions the length of life is not materially shortened thereby.

Simple *localized lobular streptococcus infections* of the lung, such as have been described by Finkler and A. Wasserman,* may so closely simulate tuberculosis as to be differentiable only by the continued absence of the tubercle bacillus in the sputum, and a negative tuberculin reaction. Such cases, compared to the prevalence of tuberculosis, do not occur with sufficient frequency to make their similarity of much clinical importance.

It is always well to defer a positive diagnosis in cases complicated by pleural effusion, bronchitis or any other acute infection. A certain number of cases are encountered which

*Quoted by Fränkel. *Spezielle Pathologie und Therapie der Lungenkrankheiten*, 1904.

baffle even the most expert diagnostician for a time, but repeated and careful examinations will usually solve the perplexity.

The diagnosis of incipient pulmonary tuberculosis should be within the power of every physician. The vast majority of cases require neither special facilities nor unusual abilities for their detection. It is largely a question of care and common sense, together with a reasonable degree of efficiency in medical knowledge and of skill in physical diagnosis.

It is a deplorable fact that many practitioners to-day are either unable or unwilling to diagnosticate pulmonary tuberculosis in its early stages. This is in part due to the general skepticism which exists to a greater or less extent in regard to the curability of the disease. To some members of the profession, the fact that the patient makes a satisfactory recovery at home in the course of a few months is a proof that the disease was not pulmonary tuberculosis; notwithstanding the fact that nearly every human being has harbored some tubercle bacilli in his system at some stage of his career, and that autopsy statistics reveal distinct tuberculous lesions in nearly one-half of all cases dying from other diseases. The frequency with which supposedly incipient cases of tuberculosis are sent to the examiners of the White Haven Sanatorium, which upon examination are found to have two, three, or even more lobes of the lung distinctly involved, is almost beyond belief. Non-tuberculous cases are not often diagnosticated as tuberculosis; but the reverse, unfortunately for the patient, is a common occurrence. It is time for the medical profession at large to realize more fully that attacks of chronic bronchitis, bronchopneumonia, influenza, typhoid fever, etc., less frequently "go into consumption" than that they are manifestations of tuberculosis from the onset. "It is probable that if the physician resisted his life-long habit of optimism and erred in the opposite direction in cases of suspected tuberculosis, the mortality list would be shorn of a measurable proportion of its bulk."—Butler.

The crusade against tuberculosis, which is having an awakening in this country, cannot be efficiently carried out by a few specialists alone. Neither will the multiplication of sanatoria throughout the land be of benefit to the population as a

whole, or bear such fruits as will justify their erection, until the medical profession at large is able to recognize pulmonary tuberculosis in its incipency and is willing to send patients to these sanatoria who are still in curable stage.

THE DIAGNOSIS OF ADVANCED PULMONARY TUBERCULOSIS.*

BY FRANK A. CRAIG, M.D., PHILADELPHIA, PA.

In taking up a subject which presents so many varied forms it becomes necessary to group the different types together in some systematic way in order to bring it within the limits of the present paper. The classifications according to distinct clinical types or depending on distinct pathologic conditions are too elaborate, except for a detailed study, the cases running one into another so closely and changing so constantly. The classification of Turban has been selected for the reason that, although somewhat crude and restricted, it possesses the advantage of simplicity, and further takes into account not only the local conditions, but also the constitutional effects of the disease.

Turban divides the cases into three classes. Class I. Mild cases, infiltration of at most one lobe or two half lobes. Class II. Mild cases, infiltration of at most two lobes; or severe cases, infiltration of at most one lobe. Class III. All cases not included in Classes I. and II. This paper will only consider Classes II. and III., considering them together.

The diagnosis of tuberculosis has passed through various phases or epochs, determined by different important discoveries which had marked influence upon the methods of that period. Perhaps the first great step in more recent times was brought about by the work of Laennec, which started the era of diagnosis by "physical signs," at which time the diagnosis was based entirely upon the examination of the patient, with a tendency to disregard the history of the case, and the symptoms. Later under the stimulation of Koch's great discovery it suddenly passed into the era of "bacteriologic diagnosis," at which time the enthusiastic supporters of this method disregarded physical signs and depended entirely upon the finding of tubercle bacilli in the sputum for their diagnosis.

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The influence of this idea has not been entirely overcome in the present day. With improvement in the method of treatment, which emphasized the importance of early diagnosis, every effort was bent upon discovering some absolute means of early diagnosis other than those in use. Thus the era of "early diagnosis" is characterized by various methods of diagnosis, each with its group of adherents all more or less enthusiastic. Even the most devoted followers of the Röntgen-rays, tuberculin reaction, examination of the cellular elements of the blood, blood-serum agglutination tests, study of the temperature after exercise, and chemical examination of the urine as a means of diagnosis, emphasize the importance of merely considering them in conjunction with a thorough study of the case itself.

The age, sex, habits, social condition and general history have of course the same bearing in an advanced as in an early case, and I will only mention one or two points which have special significance in the former. The exact, or as nearly exact as possible, determination of the duration of the disease is important in its relation to the amount of involvement, when considering the nature of the condition present. This is true also of the general surroundings and mode of life of the patient. For example, a patient who has only slight involvement of long duration under unfavorable circumstances is distinctly different from a patient with extensive involvement of short duration under favorable circumstances. This point belongs perhaps more to a consideration of the prognosis and treatment, but a diagnosis is of little practical value unless it includes not only the presence of, but also the character of, the involvement.

In describing the symptoms I have tried to give, wherever possible, the proportion of cases of tuberculosis in which the different phenomena occur. The figures are taken from the statistical reports of Roepke and Turban, for the reason that these two authors use the same classification, to which I have already referred.

The symptoms to be considered are cough, loss of weight, hemorrhage, night sweats, chest-pains, dyspnea and cardiac palpitation.

Cough. This is perhaps the most frequent symptom in advanced cases of tuberculosis, it being extremely rare for cases

to proceed to this stage without more or less marked cough. That cases may rarely go on to even cavity formation without severe cough should never be lost sight of. It is in no way characteristic, varying in time, character and degree. The expectoration also varies greatly, both in quantity and appearance, from the thick, tenacious, nummular sputum to fetid purulent material. The morning cough with expectoration, due to the retention of secretion over night, may first attract the patient's attention to the presence of cough, but is not distinctive. Both authors quoted give this symptom as occurring in 100 per cent. of cases in this stage.

Loss of weight is as common a feature as the foregoing symptom. It varies from merely slight loss, which it may require very careful questioning to bring out, to marked emaciation. It is generally progressive, with occasional slight remissions under favorable circumstances. This was also present in 100 per cent. of cases.

Hemorrhage. When it can be definitely determined that the hemorrhage is from the lung itself, this is a most valuable sign. It may not infrequently be the first symptom to call the patient's or the physician's attention to the lungs. The nature of the hemorrhage in regard to its cessation, whether spontaneous, following violent effort or trauma, is important. The statistics quoted by Osler in regard to hemoptysis in general give interesting figures. Of apparently spontaneous hemoptysis about 86 per cent. are due to tuberculosis, of those following exercise about 74 per cent. are due to the same cause, and of those following trauma 50 per cent. are not due to tuberculosis. On the other hand, 70 per cent. of Roepke's cases had hemoptysis and 61 per cent. of Turban's. Mitral stenosis as a cause of hemoptysis is not uncommon and should always be excluded.

Night sweats. Although not quite so frequent as the former symptom, they are not uncommon, occurring in 55 per cent. of Turban's cases. They may occasionally be very severe in character and form a most distressing symptom. They occur most frequently in the early morning hours.

Chest-pains. These may occur between the shoulder blades, in the shoulders, or in the sides of the chest, the two first mentioned occurring more frequently in the early cases. The

pains in the chest itself are much more common in the advanced cases, due either to an extension of the tuberculous process to the pleura or to some associated inflammatory process.

Dyspnea and cardiac palpitation, although in no way distinctive, are not uncommon symptoms. The former frequently may cause the patient great distress, and does not seem to bear any constant relation to the amount of lung tissue involved.

Fever. This is not a constant feature, but the cases are extremely rare that do not show some elevation of temperature at some time during the twenty-four hours. This elevation may be slight and detected only by careful methods in using the thermometer and frequently goes undetected when these precautions are neglected. I refer to insisting upon the patient keeping the thermometer well under the tongue, the lips kept tightly shut, not taking the temperature directly after patient has taken anything hot or cold and being careful to leave the thermometer in the mouth from six to ten minutes. The type of fever varies greatly not only in different cases, but in the same patient at different times. An afternoon or evening rise with morning remissions or intermissions is by far the most common. This rise may be very high at times, with marked intermissions, and shows, as a rule, decided irregularities. Some writers lay great stress also upon a premenstrual rise in the temperature in tuberculosis female patients, and others in a rise in temperature following exercise.

Pulse. A rapid pulse is the rule, not always proportionate to the degree of fever or even the amount of involvement. Cases which show very slight rise in temperature, showing frequently a pulse of 100, 120 or even 130. The character of the pulse is not typical, although a soft but compressible pulse is commonly noted.

Physical examination. In the examination of the patient we have the most important method of diagnosis. The signs elicited vary greatly in character and require not only careful but repeated examinations to determine their significance.

Inspection. By this means one notes the general appearance of the patient, character of skin and mucous membranes, amount of subcutaneous fat and general muscular development. More important, however, are the configuration of

the chest and expansion of same during respiration, noting the rate, excursion and a comparison of the two sides. There has been so much stress laid upon the long, narrow, phthisinoid chest, with its vertical ribs, narrow costal angle, and projecting scapulæ that I merely mention it in passing. It is met with fairly frequently; Roepke shows 26 per cent. Another type of the chest is the chest with a narrow anteroposterior diameter. Any form of chest, however, may be the seat of tuberculosis. Localized retraction or tardy expansion either of one or both apices, especially depression above or below clavicles, are also valuable when present, and when sought for carefully will be found not infrequently.

Palpation is mainly useful in confirming inspection, especially in detecting diminished expansion, and in estimating vocal fremitus, the latter being increased over consolidation or cavity, and diminished over collections of fluid or thickened pleura.

Percussion. On percussion the note will vary according to the amount of infiltration, consolidation, excavation of or effusion into the tissue beneath it. Where the infiltration is disseminated, and there is still a comparatively large amount of air-containing lung-tissue between the tubercles, one may get an impairment of the normal note which is extremely difficult to determine. In percussion of the apices one obtains the most important information, as at this point the involvement is further advanced and the signs, as a rule, are more evident. The percussion of the clavicles, supra and infraclavicular fossæ, therefore, gives one the most decided results; especially is this true if only one lung is affected, and one has the opposite lung for comparison. The difference between the two being brought out best by getting the patient to take a deep breath and then hold it, when the percussion at corresponding points on the two sides may show the impairment or dulness to be quite striking. Occasionally the dulness posteriorly may be more evident than anteriorly, and the percussion of the supraspinous and interscapular spaces should never be omitted. The note obtained may vary from a slight impairment to dulness, according to whether one is dealing with a disseminated infiltration or a consolidation. Over deep seated cavities with consolidation around them one may get a note which varies

very little from the normal or may even be dull. Over superficial cavities, however, the note is hyperresonant or even tympanitic. When cavities are quite superficial one occasionally finds the typical cracked-pot sound. It is of importance in percussing the chest that the muscles should be well relaxed; this is best obtained by having the patient in a comfortable sitting position with the shoulders "dropped."

Auscultation. The auscultatory phenomena are so numerous that I will merely mention those sounds most closely identified with the varying degree of involvement. With slight infiltration one may get merely a prolongation of the expiratory murmur and feeble breath-sounds or occasionally harsh respiratory murmur, which may be jerky or "cog-wheel" in type. Rales when present are generally fine and crackling, and may be only noted at end of deep inspiration after a cough. As the amount of infiltration advances the respiratory murmur changes, expiration becomes more prolonged and higher-pitched until consolidation occurs, when it becomes bronchial in character. The rales also become more numerous, as a rule, and are larger and more moist in character. Over cavities of moderate size the breath-sounds are cavernous or occasionally may be amphoric, and rales are large and bubbling. Vocal resonance is increased over any infiltrated area (except where thickened pleura or pleural effusion intervenes) in direct proportion to the amount of involvement until consolidation is reached, when bronchophony or whispered pectoriloquy may be found. The latter is, of course, heard best over cavities, especially when superficially situated. Pleuritic friction rubs may be frequently noted and are often very hard to differentiate. Considerable consolidation around a bronchus may simulate a cavity very closely.

As to the value of percussion and auscultation in making a diagnosis, some authors claim greater precision in one and some place more value on the other. It is a personal matter entirely, which must be settled by each one for himself. A careful application of all the methods of physical diagnosis will perhaps give the best results.

Urine. Although the examination of the urine may give very few data in this condition, it should never be omitted. Glycosuria and albuminuria, while not common, occur not

unfrequently, the latter occurring in the later stages, due probably to some degenerative change in the kidney. A positive diazoreaction is a very unfavorable sign in tuberculosis; except as an aid to prognosis the test has little value in this condition. Ehrlich's dimethylamidoazobenzaldehyde reaction in the urine is not typical of tuberculosis, as it occurs in numerous other pathologic conditions. Another condition suggested as being indicative of tuberculosis is phosphaturia alternating with albuminuria.

Sputum. In the examination of the sputum we have a most valuable and positive aid in the diagnosis, and one fortunately that is very easily carried out. The presence of tubercle bacilli in the stained expectoration is an absolute diagnostic sign of tuberculosis. The contrary, however, does not hold good, and the absence of tubercle bacilli from the sputum does not exclude this condition. A frequently repeated and carefully made examination of the sputum will in many instances reveal their presence. Roepke found the bacilli present in 67 per cent. of cases in Class II. and in 100 per cent. in those of Class III. Turban found them present in 89 per cent. of cases in Class II. and in 98 per cent. of cases in Class III.

Tuberculin. This agent has been highly recommended by numerous observers, more, however, as a means of confirming the clinical examination than as a means of diagnosis in itself. It is useful mainly in early cases, as the results are not so good in the more advanced cases. Its field of usefulness is somewhat limited, however, as it requires keeping the patient under very careful observation for a week to ten days, although one investigator has used it in dispensary cases with fairly satisfactory results. It has not been used to any great extent owing to the prevalent idea that it may disseminate a localized tuberculosis.

Blood. The examination of the corpuscular elements of the blood gives very little assistance. The blood counts and findings are not constant. Especially is this true in the early stages, when it would be of the most value. The absence of eosinophiles, however, has an unfavorable, and their increase in number a favorable prognostic value.

The serum agglutination test of Arloing-Courmont is unreliable, as shown by numerous observers. The technique is also

too elaborate for general use, requiring laboratory facilities for its performance.

Rontgen-rays. Although quite satisfactory results have been obtained from the use of this method, it requires a careful special training in order to be of any value at all.

DIFFERENTIAL DIAGNOSIS BETWEEN PULMONARY TUBERCULOSIS AND CONDITIONS RESEMBLING IT.*

BY H. R. M. LANDIS, M.D., PHILADELPHIA, PA.

The conditions simulating advanced pulmonary tuberculosis are so numerous that lack of time will necessitate but a brief reference to many of them. Therefore, I will restrict this paper to those conditions which have caused errors in diagnosis, both by members of the staff of the Phipps Institute and by members of the profession who have referred cases to the Institute.

Most of us have a definite picture of pulmonary tuberculosis in its advanced form, and a case giving a history of loss of weight, cough, expectoration, hemoptysis, fever and night sweats in association with certain physical signs is looked upon as most certainly tuberculous.

There are two points, however, which if kept in mind will obviate many mistakes. The first is that pointed out by Fowler, namely, that there is a definite "line of march" taken by the invading tubercle bacillus. The disease almost invariably starts just below the extreme apex on one side and pursues a downward course. The lower lobe of the lung first affected is almost invariably involved before the apex of the opposite side is attacked. This always results in the disease being in a more advanced state at the apex than in the lower lobe.

The second point of importance is the examination of the sputum in all cases of pulmonary disease. While too much stress has undoubtedly been laid on the finding of tubercle bacilli in incipient tuberculosis it can safely be said that too great laxity prevails in similiar examinations in what are apparently advanced cases.

Systematic examination of the sputum is insisted on at the

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Brompton Hospital, and this precaution alone has led to the detection of many obscure conditions.

In taking up the diseases which simulate tuberculosis it may be said that some of them are quite rare and can be dismissed with a word.

Actinomycosis, aspergilosis and hydatid disease depend for their recognition on the absence of tubercle bacilli and the positive identification of the ray fungus, mycelium or hydatid hooklet. The same brevity may be applied to intrathoracic growths which are usually evident from the history, pressure symptoms and physical signs.

Among the common conditions causing confusion is *chronic bronchitis*. This is particularly the case in advanced life, where the tuberculosis often runs a latent course, with a normal or subnormal temperature, and the associated emphysema mask the physical signs. The diagnosis in such cases offers considerable difficulty, and may be impossible without the finding of the tubercle bacillus. There is nothing distinctive of tuberculosis either in the symptomatology or the physical signs. Suspicion as to the true condition may be aroused, however, from the following points: The cough, while worse in winter, never entirely disappears; on physical examination it may be noted that the signs are more marked at both apices or at one apex alone; and in addition a definite history of exposure or family predisposition may be present.

Bronchiectasis.—This is a not uncommon source of error, especially in the diffuse form in which the bronchi of a lobe or even an entire lung may be dilated. The dilations may be sacculated, cylindrical or fusiform. The condition is almost invariably secondary to some prolonged inflammation of the bronchi or to induration or consolidation of the surrounding tissue. Therefore a history of prolonged bronchial inflammation, measles, whooping cough, pleurisy, and particularly pneumonia, is important.

There is no single symptom of tuberculosis which may not be present in this condition, but there are several points which render the diagnosis probable, and with the absence of tubercle bacilli it becomes almost a certainty. Cough, expectoration and dyspnea are the important symptoms. The expectoration is quite characteristic, occurring in large quantities at a time,

and particularly on rising in the morning. The dyspnea is variable, depending on the extent of lung tissue involved and the implication of the right heart. Pain in the chest is frequent and important, usually indicating extension of the process to the surface of the lung. Fowler states that clubbing of the fingers is so extreme as to be of value in the diagnosis. In three cases I have seen this was certainly true.

The physical signs in the majority of the cases show the lesion to be at the base or about the root of the lung. *Fremitus* is usually increased, especially if fibrosis coexists. The percussion note depends on the underlying condition: if there be surrounding emphysema the note will be hyperresonant; if the dilations be large the note may be tubular or tympanitic in character; while if fibrosis be present dulness is the result. The breath sounds are bronchial or cavernous, while whispering pectoriloquy and amphoric breathing are present over the superficial dilation. The rales may be large and bubbling and of a metallic character, or, in the presence of fibrosis, superficial and crackling. The "veiled puff" of Skoda may also be present. I have met with this sign in one case. It occurs at the end of inspiration and gives the impression of a puff of air suddenly entering the dilated portion of a superficially placed bronchus.

When the dilations are confined to an upper lobe the differentiation is more difficult. In bronchiectasis of the upper lobes the dulness rarely extends above the clavicle, and the flattening below the clavicle is slight as compared to that in tuberculosis. The greatest source of error is in those cases in which there are signs of a cavity in the interscapular region. While a tuberculous cavity may exist at this point, it is rare without some evidence anteriorly.

Fibroid Lung.—Also referred to as chronic pneumonia, cirrhosis of the lung and interstitial pneumonia.

Pathologically the condition is characterized by an overproduction of fibroid tissue, which tends to diminish the size of the organ and cause marked retraction of the chest wall. The opposite lung, unless both are involved, shows a marked degree of emphysema. It is believed by some that the pulmonary process is but a part of a general fibrosis, because of the associated arteriosclerosis and contracted kidney some-

times met with. Sir Andrew Clark, Hadley and Chaplin, in their monograph on fibroid diseases of the lung, made the following divisions: (1) Pure fibrosis in which there is no tubercle; (2) tuberculofibrosis, a condition primarily tuberculous, but in which extensive fibroid changes have taken place; and (3) fibrotuberculosis, a condition in which the primary state was fibroid, but subsequent infection with tuberculosis takes place.

Pure fibroid disease is not uncommon in children, and in these cases there is generally a history of some catarrhal affection of the lungs, either measles, whooping cough or bronchopneumonia. In adults a history of pneumonia is frequent. Other contributing causes are bronchiectasis, inhalations of irritating substances, pleurisy, syphilis and foreign bodies in the bronchi. A long-standing empyema may cause collapse with subsequent fibroid changes. One such case came to autopsy at the Phipps Institute. Two of the authors above quoted believed the condition was more common in children, while the third had seen more cases among adults. Cough, expectoration and dyspnea on exertion are the symptoms most commonly observed. Marked deformity, as a rule, characterizes the disease. The affected side is retracted; the ribs become approximated, or may even overlap; the spine is drawn toward the affected side, and the heart is pulled out of its normal position, the retraction always being toward the affected side. In right-sided fibrosis the apex beat may be in the fifth interspace in the nipple line on the right side.

The physical signs are variable, and depend largely on the presence or absence of bronchiectasis. When dilations of the bronchi are present the percussion note may be tubular or tympanitic in character; in their absence it is usually dull. With dilation of the bronchi the rales may be bubbling and metallic in character or fine and crackling. The breath sounds may be bronchial or cavernous, or, in the absence of dilations, feeble and distant. The emphysematous condition of the opposite lung gives a hyperresonant note, which may extend beyond the median line of the sternum, and the breathing is *perilè* in character. Basic heart murmurs are commonly present, usually at the pulmonary orifice, and systolic in time.

In differentiating pure fibroid disease from fibrosis with an

associated tuberculosis, the presence or absence of the tubercle bacillus is of course the all-important point. In addition, pure fibrosis runs an afebrile course, the constitutional disturbances are slight, and the opposite lung shows no signs of infiltration or consolidation.

Among the older clinicians, *syphilis of the lung* was looked upon as comparatively frequent. Later the existence of syphilitic disease of the lung was questioned unless it could be demonstrated pathologically. In proof of the rarity of the disease is the experience of Fowler, who states that in a careful search among the museums of the London hospitals he could find but twelve examples of syphilis of the lungs, and in two of these it was doubtful. Recently, however, papers by Janeway, Stengel and Berg would seem to indicate that the condition is not infrequently met with.

Pulmonary syphilis may be strongly suspected if a patient presenting the physical signs and symptoms of tuberculosis has no tubercle bacilli in the sputum after repeated examinations, and in addition has evidences of tertiary syphilis. During the past winter I have seen two colored women who illustrate these points. Both came to the dispensary complaining of cough, profuse expectoration, hemoptysis (in one case), night sweats and loss of weight. The physical signs closely resembled those of advanced phthisis without cavity formation, except that in one case the signs were more marked at the base. In one case there were typical syphilitic leg ulcers, while in the other there were scars on the arms and body of a recent rupial eruption. One case has been lost sight of, but in the remaining case no tubercle bacilli have been found, and she is showing marked improvement under potassium iodid. A case reported by Stengel made a complete recovery under the iodid, although he had been admitted to the hospital in a dying condition.

There still remains another condition which experience has shown to be a frequent source of error, namely, *mitral stenosis*. I mention it simply to call attention to the fact that this valvular lesion is a frequent source of blood-spitting. The only cases of mitral stenosis which should offer any difficulty in determining the source of the blood are those in which there is no murmur. In these cases careful examination will usually reveal a faint thrill above the apex beat, accentuation of the

second pulmonic sound, a small pulse, and that peculiar quality of the first sound which Da Costa designated as clacking.

In conclusion I wish to emphasize the importance of keeping in mind the definite "line of march" taken by the invading tuberculous process and the necessity of systematic and repeated sputum examinations in all doubtful cases.

THE ANTISEPTIC TREATMENT OF SMALLPOX,*

BY SAMUEL M. WILSON, M.D., PHILADELPHIA, PA.

During the last few years an unusual interest in smallpox has been shown, particularly in regard to its diagnosis. Interest is always felt in the question of treatment. This has two objects: assisting the patient to recover his health and, if possible, to protect him from disfiguring scars. Most clinicians treat the disease on general principles, light diet and cool baths, or sponging, during the primary fever; symptoms that assume prominence being met by any means that appear suitable.

When the suppurative stage is reached, we have to deal with a general septic condition, calling as usual for supporting treatment and the free use of stimulants, particularly alcohol. Internal antiseptics appear useless.

Various plans to avoid scars have been tried. Many still follow the old method of excluding light from the sick-room, and applying some emollient, such as vaseline or glycerin, incorporating usually an antiseptic, but mainly with the object of preventing early rupture of the pustule. Others prefer to puncture the vesicle and apply a wet dressing of an antiseptic solution of plain water. The use of red window-glass or red curtains seems useful, but is said to prolong convalescence, and it is doubtful if the withdrawal of the ultraviolet rays of light is not injurious to the patient, as well as to the micro-organisms at fault.

The frightful scarring shown by some of those who have recently recovered from the disease proves that the plans in common use frequently fail. I would like, therefore, to draw attention to a method that has been recommended by several

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writers: the daily use of scrub baths. Some of the more recent text-books refer to it. Perhaps the main reason that it is not generally adopted, is that it is rather painful to the patient, after vesiculation has commenced. Thoroughly used before the primary papules develop, it appears to prevent vesiculation. Instituted too late for that, it does away, to a great extent, with the repulsive appearance and foul odor characteristic of cases treated without this means.

If the patient be not seen until vesiculation has begun, the summits of the vesicles must be punctured, compresses of full strength hydrogen peroxid solution applied, and these followed by a mask wet with some antiseptic. A solution of mercury bichlorid—one part in fifteen hundred parts of water—gives good results. This need remain in place for a few minutes only. The hydrogen peroxid followed by the mask may be used several times daily if desired, and appears to add to the comfort of the patient, as well as to promote desquamation.

In two unvaccinated young girls in whom vesiculation was commencing when the patients were first seen, the scrubbing, combined with puncture of the vesicles, was very successful. Where the treatment was thoroughly applied, on the hands and face, the vesicles, although large and numerous, left only a few faint traces, almost imperceptible on close examination. The legs and feet received less care, and several well marked pits resulted. Neither child was seriously sick after the seventh day of the disease.

If the characteristic umbilicated pustule fails to develop, it is practically impossible to declare a case, that recovers, to be one of smallpox. In several cases in which a probable diagnosis of beginning varioloid was made, the scrubbing treatment, with toilet sandsoap, was applied promptly. Four of these were in one family. In each a vesicular rash appeared, drying in a few days, but left a few perceptible scars. In two other cases, a daughter, and subsequently her mother, developed a macular rash followed by desquamation and showed no further evidence of being ill, the disease lasting four days in the mother and five in the child.

CHOREA AND ANEMIA.

BY ROSHIER W. MILLER, M.D., PH.G., BARTON HEIGHTS, VA.

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In the etiology of chorea, nothing is noted relative to anemia. It is simply accounted as an accompanying symptom of the condition. Medical literature emphasizes the relation between rheumatism and chorea, with anemia as an important symptom. After observation of several cases, I am strongly of opinion, however, that anemia as a causative factor is worthy of investigation.

Anemia of toxic origin presents pathological conditions which favor the production of choreaic affections. It is true that simple anemia is, as a rule, of secondary origin, and, viewed in this light, it may be argued that if chorea arises, it is the result of the primary and not of the secondary conditions—thus agreeing with the admitted etiology. This argument, however, will not satisfactorily explain those cases of chorea which arise remotely from the primary condition, but recently from the secondary effects.

I submit three cases in which symptoms, treatment, and recovery seem to intimate at least a possible relation between anemia and chorea.

CASE I.—A female child of eight years gave a history of typhoid fever eight months prior to my visit. According to the mother's statement, the child had made a quick and good recovery, gaining rapidly in weight and exhibiting the energy of her former life. Six months later she became irritable and pale, with pain in her arms and legs, which condition was soon followed by gastric disorders and irregular spasms of the muscles of the face. Simple anemia was in evidence from objective and subjective symptoms alone, but was unquestioned in the light of the results obtained from blood examination—the red blood element being present to the extent of barely 3,000,000 red corpuscles per c. m.

This case was treated with two teaspoonfuls of pepto-mangan (Gude) and two drops of Fowler's solution, three times a day. After gastric symptoms had abated somewhat, two raw eggs per day were added to the diet. The patient was discharged in five weeks, completely recovered.

CASE II.—A female child of ten years of age; gave history of malaria (a well-defined case of intermittent fever) one year previously. The pallid condition of the child induced the mother to solicit my aid. Upon examination, I found slight choreaic movements which had escaped the mother's eye, though she did admit that the child "could not sit still very long at a time," and "was constantly working her fingers." The blood examination revealed no plasmodium. The red cells were reduced to 2,800,000 per c. m., with a proportionate decrease of hemoglobin.

Pepto-mangan (Gude) alone was employed in doses of two drams in a glass of milk three times a day. The blood examination four weeks later showed red cells present to the amount of 3,900,000 per c. m., at which time I dismissed the case completely recovered.

CASE III.—A female child of thirteen years. Two months before my visit, the mother informed me, the child became peevish and pale, and was reprovved at school for her inability to write neatly. She was taken from school, but she grew rapidly worse. Morning nausea, vomiting, headache, and anorexia were her daily companions. I found her with pronounced histrionic spasm, with involvement of the upper and lower extremities. Hemic murmurs were plainly apparent, but no endocardial irritation could be determined. The blood count showed reduction in red cells to 2,100,000 per c. m. The hemoglobin was reduced to a degree greater than the red cells. A curious feature of the case was the morning nausea. Immediately upon awakening, she experienced nausea, which was followed by vomiting. I discovered, however, that this condition was superinduced by odors from the kitchen, and directed that a small sponge, moistened with creosote water, be placed over the nose and mouth before the preparation for breakfast began. The annoying symptom was promptly checked by this simple method. The anemia in this case may have been produced by malnutrition, but even this view is mere speculation.

The irritability of the stomach in this case was so pronounced that I did not deem it wise to give nourishment—not to speak of medicine—by the stomach. During the first four days rectal ailmentation was employed. A nutritive enema, consisting of four ounces of peptonized milk and two drams of pepto-

mangan (Gude), was given every six hours. Small amounts of peptonoids with creosote on ice were given by the stomach. Egg albumin was taken in all the water she drank. After four days, the stomach was tested with small amounts of milk and pepto-mangan (Gude). Beginning with four ounces of milk and one dram of pepto-mangan (Gude) every four hours, the amounts of each were rapidly increased, until after three days the patient was taking eight ounces of milk every two hours and four drams of pepto-mangan (Gude) three times a day. This diet, plus three raw eggs a day, together with the above treatment, was all that was employed for six weeks. The blood examination at this time showed a highly gratifying condition—the red cells being present to the extent of 4,100,000 per c. m. The bloom of youth once more tinted the cheek, and the shrine of St. Vitus lost a visitor.—*Virginia Medical Semi-Monthly*.

ALVEOLAR PYORRHEA: ITS CAUSE, SEQUELAE AND CURE.*

BY D. D. SMITH, D.D.S., M.D., PHILADELPHIA, PA.

In a beguiling pamphlet recently sent out to the dental profession by a manufacturing concern, may be found a labored attempt to present alveolar pyorrhea as a constitutional disease due to a so-called uric acid diathesis. This pamphlet, although signed by an M.D., is evidently from the pen of one wholly without experience. Having a meteoric surface-glow, the article is well framed to mystify and mislead respecting the true origin and not less the treatment of the disorder. Names, facts and inferences are speciously garbled and perverted, unmistakably in the interests of a commercial preparation recommended as a constitutional remedy.

We shall do well to remember that in constitutional disturbances pyorrhea is to be reckoned with as a *cause* of disease, but never as a *result*. The etiology of pyorrhea can no longer be dismissed by the theorist with the affirmation that "it is a disorder of constitutional origin"; for its manifestation near to, or past middle-life only; its universal location about the roots of natural teeth; its special association with teeth of dense

*Read before the Philadelphia County Medical Society, April 27, 1904

structure having large bell-shaped crowns practically exempt from decay ; the complete immunity of all edentulous mouths, and more than all, the absolute cure without regard to constitutional conditions which attends the removal of the cause or the extraction of the teeth, all point with unerring precision to it as a trouble having positive and distinct local origin.

The *local* cause universally assigned for alveolar pyorrhea is deposits of calculi upon the teeth. Those pretending to find a so-called constitutional cause ascribe it to the "gouty diathesis" or to some "constitutional *vice*." These assigned causes are wholly inadequate to account for the manifestations of this depraved condition.

Accurate observations reveal the fact that deposits of calcarious matter (tartar) upon the teeth, while causing absorption of their supporting structures, seldom or never give rise to a condition of true pyorrhea. The teeth more frequently found enveloped in masses of salivary calculi are the lower incisors and cuspids and the superior first molars. Whilst these teeth may be loosened even to the point of exfoliation through absorption of the alveolus, due to increasing deposits of tartar, this condition is not alveolar pyorrhea. The development of pyorrhea in the mouth is wholly the result of local infection ; an infection arising from the breath, from vitiated mouth secretions and excretions, and from chemical decomposition and decay of waste substances in the high temperature of the mouth. Toxins from these and other sources are constantly present, and becoming cemented to the teeth chiefly by the mucous secretion form the so-called bacterial plaques, which are retained day after day, often year after year, becoming stagnant, offensive and most virulent infection. Pyorrhea is common to both sexes, but rarely if ever found to originate in connection with devitalized teeth. It seldom manifests itself before middle life, and then much more commonly in mouths in which practically full and crowded dentures are found.

Heredity has no influence whatever in the development of the disorder. That it has a marked influence in determining the shape and general characteristics of the teeth is well known and readily conceded ; but while certain shapes and characteristics of the teeth are favoring conditions in the development of pyorrhea, they are in no sense a cause of the trouble.

Temperament as a factor in pyorrhea is very imperfectly understood. As an example of wholly erroneous views respecting it, a professor speaking recently upon this point declared that the disease prevails more generally in the sanguineous temperament. The actual condition is exactly the reverse of this. It is extremely doubtful if a mouth with the typical marks of the true sanguine temperament,—teeth of yellowish hue, small rather than large, perfect in mould, shape and structure, short and having little cervical constriction, regular in development, never unduly crowded, occlusion perfect,—was ever the subject of pyorrhea. I have never seen one. *Per contra*, the nervous, bilious and lymphatic temperaments, with all their compounds and admixtures, present formations and conditions of teeth and jaws which favor the retention of infection and the consequent development of pyorrhea. No classification of temperaments can possibly make the subject plain.

There are certain local conditions that promote the development of pyorrhea, and these demand most careful study. They are: first, the *presence of natural teeth in the mouth* (pyorrhea is impossible without natural teeth); second, the shape, character, number and placement of the teeth themselves; and third, the condition of the crown surfaces and the character and properties of the fluid environment of the teeth when the mouth is in repose. That the *presence* of natural teeth is necessary for the development of pyorrhea is manifest in the fact that it never appears in an edentulous mouth, even though the supposedly favoring constitutional factors, uric acid and gout, may be present.

The general character of the teeth, whether they are dense in structure with only a thin layer of cementum enveloping the roots—a condition necessitating limited and difficult circulation in this tissue—or whether they are softer in structure and possessed, as is usual in such cases, of a thicker cemental layer, thus permitting freer circulation in the cementum, with increased vital energy to oppose external encroachments, present important local conditions *favoring* pyorrhea in the one case and *opposing* it in the other.

The anatomical formation of the teeth also, whether having large and irregular crowns with strongly marked necks, and crowded into small, misshapen arches, or whether the reverse

of these conditions prevails, viz.:—teeth small or medium in size, crowns merging into roots without marked cervical constriction, and regularly set in well developed arches,—these conditions form marked predisposing or prophylactic features in the development of this disorder.

The third and most important factor among the local conditions for the induction of pyorrhea is the infection inevitably present on all exposed crown surfaces of the teeth, especially the proximal surfaces. Even when considerable care is taken of them, viscid toxic matter quickly accumulates upon untreated teeth, which is retained day after day, becoming stagnant and fetid, especially in the more inaccessible places, as between them and along the gum margins. These stagnant accumulations act to obstruct circulation in the gums, cementum and alveolus, and induce inflammation in all surrounding tissue. This infection on teeth is greatly intensified in virulence and activity by the high normal temperature of the mouth, as well as by toxic emanations from decaying tooth substance and decomposing food particles. These (and if there be any special local irritants, they are included) are the more active auxiliaries in originating pyorrheatic conditions, the subjects of which are legion.

The inflammation of pyorrhea begins in the tissue at some portion of the cervix of the tooth, more commonly on the lingual or palatine aspect or at some inaccessible point between the teeth, frequently between the larger molars.

Not all the teeth in any one mouth are ever the subject of pyorrhea at any one time. Strong, healthy teeth with living pulps are the special subjects of pyorrheatic attacks. Teeth which have been devitalized in comparatively young life, if the roots have been properly treated, are virtually, if not absolutely, immuné. This is due to the fact that cemental structure is not solidified or changed in character or quantity after devitalization of the pulp and dentin, save as it may be increased in thickness by external deposit.

I have never witnessed, in any case, the loosening and destruction of an entire set of teeth due to pyorrhea. With the displacement and loss of a single pyorrheatic tooth (much more a considerable number of such teeth) there is marked decrease in virulence of the infection as well as lessening of

the inflammatory exudates. Movement of the tooth is always outward away from the point of the inflammation, as in effort to expel the irritant from the mouth. A tooth is never forced toward the center of the mouth, but always away from it, by the pyorrhæic inflammation. Rapid elongation, protrusion or rotation of a tooth—movements at times attended with great force and considerable pain—indicate that the pericementum and cementum are specially involved.

To characterize the destruction of tissue in pyorrhea as "molecular necrosis" may be well enough if it is understood that the inflammation arrests, partially or entirely, the nutrition of the parts. This is especially the case in the alveolus. It is the arrest of the nutritional process which is the real cause of the excretion of the tissues at the surface. There is no zone of dead tissue exfoliated as in true necrosis. It is rather a surface necrosis. That nutrition is partially if not entirely suspended in some cases is plainly evident from the stagnant circulation, the tumefaction and purple color of the gums. The progress of the disease can only be arrested by the reinduction of normal nutrition. All remedial efforts should therefore be directed to the accomplishment of this end.

Alveolar pyorrhea with its necessary history of antecedent, long-continued septic mouth conditions, is not a result, but the unimpeachable *cause* of many serious systemic diseases, the etiology of which is not only unknown, but wholly unsuspected. Its diverse local manifestations, as the displacement of the teeth, the turning of them in their sockets, the formation of pus pockets beside the roots, the loosening of the teeth and their final exfoliation, are but minor sequelæ in comparison with the constitutional manifestations seen in the slow chronic pyemic effects.

If the effects of pyorrhea were confined to its ravages in the tissues of the mouth—the wasting of the alveolus and the exfoliation of teeth—it would be inconsiderable in importance; but the pernicious emanations from twenty or more square inches of filthy infected tooth surface, carried in inhalation directly into the circulation through the lungs, and this augmented by the perpetual ingestion of masses of mucoid toxins—pus and other pyogenic products of the disorder—develop constitutional conditions of most serious import.

The gravity of states and conditions resulting from pyorrhea in the mouth has not yet been comprehended. If better understood, it would no longer be treated with comparative indifference as at present; on the contrary, it would awaken a feeling akin to alarm. As yet no comprehensive measures have been suggested by either medicine or dentistry to allay its symptoms or avert its consequences, and both professions stand in its presence today pitifully helpless.

The inflammation of alveolar pyorrhea differs from inflammations and disease-conditions in other parts, in that the septic products are of necessity discharged directly into the mouth, whence they inevitably pass into the digestive tract.

Clinical observations show the confluence of alveolar pyorrhea with rheumatism or gout, to be infrequent, and if associated at all it is as cause and effect—pyorrhea the cause and rheumatism or gout the effect; a condition exactly the reverse of the "gouty diathesis" theory.

The conjunction of pyorrhea and renal complications is far more common and serious. Uremia is a usual result of pyorrhea, due in greater part to the perpetual ingestion of pus and other effete inflammatory products, which are constantly being disengaged in the mouth, where they are mixed with foods and drinks, and thus inevitably washed into the stomach. And here again the relation is cause and effect—pyorrhea the cause, renal complications, more commonly diabetes, the result. This has been repeatedly and indisputably proven through cure of the pyorrhea curing the diabetic condition.

This infection appeals for recognition first of all in septic states of the breath. Poisonous deposits upon the teeth due to toxicity of the breath, are a constant menace, and principal factors in primal incitement of the disorder. Although in the aggregate such deposits may be meagre in quantity, they are exceedingly virulent and violently irritative to surrounding tissues; they are rapidly augmented by alluvium from vitiated salivary and mucous secretions, and from septic excretions, and not less by deleterious products from the necrotic condition of the alveolus and the perpetually irritated and inflamed gum margins at the necks of the teeth.

(Examples of breath infection appear in the surface discoloration of gold plates, gold and amalgam fillings, as well as in accumulations on the teeth.)

It is a matter for earnest felicitation that offensive breaths, a result generally of neglected mouths, filthy conditions of the teeth, and repulsive mucoid oral fluids, are wholly preventable and surely curable when they exist.

The cause of pyorrhea being a local irritant, whether that irritant be the presence of the tooth itself or an accumulated infection on the tooth, the beginning of treatment should always be directed to the removal of the cause. Not all teeth that have been loosened through pyorrheatic infection can be redeemed and made firm, comfortable and useful, for when the disease has progressed to necrosis which involves the alveolus and pericementum, the entire circumference of the tooth, the osseous structures about the root or roots having become much absorbed—alveolar tissue once absorbed is never reproduced—immediate extraction is the proper treatment; or, if through development of a pericemental abscess, as not infrequently occurs in long-standing cases of pyorrhea, especially in connection with the molars, upper or lower, removal of the tooth is the one and only remedy.

Just here sharp distinction should be drawn between the ordinary apical alveolar abscess and the more occult and uncommon pericemental abscess. They are entirely unlike in character, in development, in prognosis and in mode of treatment. The former has been known and treated for years; the latter is of recent discovery, and is comparatively unknown. It was first differentiated by the author in 1897, and a full description of it embodied in an article which was published in the August number of the *Dental Cosmos* of that year, under the title "Pericemental Abscess." The closing paragraph of the article is as follows: "The prognosis of pericemental abscess is always unfavorable; have never been able to afford permanent nor positive relief. The only remedy—extraction of the tooth."

It should be the unvarying rule in the treatment of pyorrhea to speedily rid the mouth of all teeth which cannot be made permanently comfortable and useful. Teeth, especially molars, suffering from much alveolar absorption, if they are without natural occlusive antagonism, or any that can be rotated in their sockets, even though such movement be but slight, can never be made to retighten; their retention is a source of perpetual discomfort, a hindrance to mastication, and a posi-

tive menace to the health of the mouth. In view, therefore, of the utter inutility of such teeth, any attempt to retain them is a matter of sentiment alone; every other consideration demands their immediate removal.

Having extracted such teeth as cannot be made serviceable and comfortable, effort should be directed to the removal of all infection of whatever kind from all the remaining teeth. This infection may consist of masses of calcic concretions, coatings of stagnant inspissations, accumulations of septic matter on the exposed surfaces of crowns and roots, between the teeth, in pyorrheatic pockets, or in the many concealed nooks, cranies and irregularities found in connection with the teeth.

Dentistry affecting to see pyorrhea originate in some occult and unknown constitutional cause, has wholly failed to perceive or recognize the power of septic irritants found upon the surfaces of all untreated teeth. As there is no agency more surely destructive of the teeth themselves, nor one more provocative of general systemic disturbance, than the surface infection on them, so there is no more important operation, neither a more difficult process pertaining to the teeth, than the complete and successful removal of the pyorrheatic infection. Even when attempted at all, it is an operation performed with such laxity and indifference as to render it of little value.

Successful treatment for pyorrhea lies in the fidelity with which the toxic irritative matter is removed from the surfaces of the teeth, and rational after-treatment maintained. Constitutional remedies are wholly without avail except as cathartics, diuretics or sudorifics they may facilitate the expulsion of poisons already absorbed. Scraping of alveolar margins, removal of vital bone, massaging of the gums, and various other impractical modes of treatment have been suggested, but none of them indicate any true appreciation of the pathologic conditions involved. If necrosed bone is present, which is seldom the case, it is to be removed; beyond this, the less disturbance to the tissues involved in removal of the infection, the better the results.

All treatment should be such as surgery would institute for any wounded, abraded or excised surface in other parts, the difference being the difference in the character of the tissues

with which we are dealing and in their environmental surroundings.

There is no organ or tissue in the system to which a tooth, with its anatomic and physiologic complexities, can be logically compared. If relieved of infection and restored to a healthful condition, being fixed in the oral cavity, the teeth are at once replunged into an adverse environment and resubjected to adverse influences.

What then can be done by medical interference? Practically nothing. It cannot be made too emphatic that treatment consists in frequent and forcible change of environment,—a change more mechanical than medicinal in all that pertains to the teeth and to all mouth conditions. Every effort should be directed to reestablish healthful nutrition, which has been interrupted, if not wholly arrested, in the surrounding alveolus, pericementum and gum. No irritative toxins from the breath, from mouth fluids, offensive food particles or from other sources should be allowed on the crowns, at the necks of the teeth or in any pyorrhea pockets. Every concealed recess and nook should be reached and carefully cleansed of all accumulations with suitable instruments; and this, followed by the polishing of all exposed surfaces, including pockets, recesses and depressions, between the teeth, at the gum margins, or wherever infection may be found upon the teeth. This can be effected by hand methods only. All wheels, brushes or other revolving instruments driven by power, should be wholly discarded. Specially shaped wood points—orangewood is to be preferred—secured in suitable holders—porte polishers—should be used for this purpose. With these all parts of the mouth and all surfaces of the teeth can be reached and operated upon. The best polishing material is a fine pumice-stone. The dry powder can be taken up and carried to place on the wood points, previously shaped and freshly dipped in water for this purpose. Free application of the pumice-stone, and vigorous use of the wood points, are the most efficient agents known for removing infection from the teeth, and not less for placing them in the most favorable condition to avoid further deposits. This treatment should be repeated every forty-eight to seventy-two hours at the beginning, and regularly continued until there are evident indications of abatement of the inflammatory con-

dition and the closing of the pus pockets, when the intervals of treatment may be gradually lengthened until the limit of about one month is reached.

Every mouth with pyorrhætic tendency should be rigidly subjected to this mechanical treatment at the hands of an expert operator, for relief from the inevitable recurrence of infectious accumulations on and about the natural teeth. This treatment should be supplemented by *local* medication only. Internal remedies are not indicated, except as tonics or in special cases. Perhaps there is no better antiphlogistic or germicide for external use—and the mouth is an external cavity—than that rather disagreeable preparation known as phenol-sodique. It can be used *ad libitum* in the mouth and with great benefit, after each treatment. I have found it most efficacious applied to the gums on lint or bibulous paper.

After the second or third treatment the gums about the pyorrhea pockets and at the points between the teeth where there is greatest eversion of the festoons, should be touched regularly with deliquesced zinc chlorid. The handling of this preparation should be upon wood points. A small stick with point shaped to reach the parts may be dipped in the solution and applied as desired. It acts as a stimulant to the nutritional process. Tincture of iodine applied to the gums over a pyorrhætic cavity or tooth is a valuable adjunct in the stimulation of healthful nutrition.

Results from the treatment as outlined have proven a source of astonishment, and not less of gratification, to many who have interestedly witnessed them. Long-standing cases of pyorrhea, regarded as incurable and practically abandoned by the "constitutional cause" theorists, have readily yielded to this treatment and been cured in from six to twelve months.

Serumal deposits in pyorrhætic pockets are often difficult of diagnosis, and more difficult to remove. These deposits differ greatly in character and manner of formation from the salivary incrustations found upon the necks of teeth at the gum margins. They consist, for the most part, of smooth, hard masses of calcic matter, deposited from the stagnant fluids in the pyorrhætic pockets, cemented to the root in some irregular formation or inaccessible position, on lower teeth especially. They are not the occasion of marked inflammatory action,

although the infectious matter is commonly deep-seated. They create pockets beside the roots, in which deposits accumulate, until the alveolus separates from the root throughout its whole extent. In many instances, the presence of these deposits can only be determined by the thickened condition of the overlying gum tissue—a characteristic of this infection—by the continued pus discharge under pressure, and by the persistent movement of the tooth, often attended with great force, in a direction opposite the accumulation. Serual deposits destroy the life of the cementum and pericementum, and when these tissues have once separated, even though the deposits may have been perfectly removed, the vital union is never reestablished. For this reason extraction of the tooth is frequently the only remedy.

Statue to Dr. William Elias B. Davis. — The memory of Dr. William E. B. Davis, late of Birmingham, Ala., will be appropriately perpetuated by the erection of a monument by the Southern Surgical and Gynecological Association, of which Dr. Davis was the originator as well as founder. He not only conceived the idea, but organized the association in all its details and served as its secretary and executive officer for thirteen years. The association does well in thus testifying its appreciation of this distinguished physician, whose memory will live in spite of granite or bronze.—*Buffalo Medical Journal*.

The statue will be made by G. Moretti, who was the designer of Vulcan (the Colossus iron man which represents the Birmingham district at the St. Louis Exposition), and will be in bronze, $7\frac{1}{2}$ feet high, standing upon a granite pedestal $9\frac{1}{2}$ feet high.

Signor Moretti is now making a marble bust of Dr. Davis in Alabama marble. The plaster cast is a very fine likeness. He has made an indemnity contract to have the statue ready by the first of December next, that it may be unveiled at the coming meeting of the Southern Surgical and Gynecological Association.—*Alabama Medical Journal*.

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EDITORIAL.

VALE ASEPSIS.

The following from a recent issue of the *Canadian Journal of Medicine and Surgery* is certainly calculated to furnish much food for thought:—

“A report recently presented to the Société de Chirurgie de Lyon (*La Presse Medicale*, April 2nd, 1904) shows that the exposure of surgical instruments to burning alcohol, a much-vaunted method of obtaining the antiseptics of cutting instruments, is a failure. The experimenters placed in an enameled basin virulent cultures (staphylococci, bacteria of charbon, bacilli of tetanus), and covered them with alcohol. The alcohol was lighted, and the microbes exposed to the flame, but they were not destroyed, because when they were afterwards sown, fine cultures were obtained. A similar result was obtained by Drs. Berard and Lumiere, who instead of exposing the cultures to burning alcohol, placed them in direct contact with a Bunsen burner. Another circumstance, which particularly shows the inefficaciousness of sterilization by flame, is that the micro-organisms resist the action of fire, not only

when they are protected by a layer of dried blood or pus, but also in cases in which they are directly exposed to flame without being protected by an organic coagulum. Hence, one can readily understand that in exposing to burning alcohol a hypodermic needle, which may contain saline or organic concretions, the resulting asepsis may be of a very imperfect character."

Medicine and especially surgery is placed in a most unpleasant predicament when antisepsis is a failure and asepsis a hollow mockery. We might as well bid farewell to all progress and revert to Shamanism or faith cure.

The Missouri State Fair.—Magnificent buildings, splendid equipment, great exhibit. The three large barns, now being erected on the State Fair grounds, will be completed before the opening of the Fourth Annual Exhibition, August 15th. These buildings are of brick and stone, tile roof, steel truss supports, and are practically fire proof. They are well ventilated, all possible conveniences, modern in appearance, and have a capacity of 450 cattle and horses, making stall room on the Fair grounds for 750 animals, in addition to pens for 1,200 sheep and swine.

An addition of 120 feet in length by 70 feet deep is being made to the steel grand stand, increasing the capacity to 6,000 seats in addition to the temporary wooden structure.

Space now reserved for exhibitors, indicates that the mammoth barns, the poultry palace, and the great agricultural and horticultural halls, will be filled to overflowing. With favorable weather conditions, the greatest exhibit of the State Fair is practically assured.

BOOK REVIEWS.

International Clinics. A Quarterly of Illustrated Clinical Lectures and especially prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by A. O. J. KELLEY, A.M., M.D., with the Collaboration of WM. OSLER, M.D., JOHN H. MUSSER, M.D., J. B. MURPHY, M.D., JAS. STEWART, M.D., A. MCPHEDRAN, M.D., THOS. M. ROTCH, M.D., JOHN G. CLARK, M.D., JAMES J. WALSH, M.D., J. W. BALLANTYNE, M. D., JOHN HAROLD, M.D., EDMUND LANDOLT, M.D., RICHARD KRETZ, A.M. With Regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Vol. II., Fourteenth Series, 1904. 8vo. pp. 314. Illustrated. [Philadelphia: J. B. Lippincott Co. 1903. Price, \$2.00 net.

We again have the pleasure of being able to review an issue of *International Clinics*, and paradoxical as it may appear age only seems to rejuvenate this publication. This apparent paradox is one which is easily explained on examination of the present number, which is an exceptionally good one. This excellence is due to the fact that the articles are timely as well as practical. In addition to this they are original and the entire work is well illustrated and these illustrations are not introduced for the purpose of embellishing the volume but rather to teach, and they are so well executed that they certainly do both. When we examine the volume critically, and consider the names of the contributors to its contents, it is certainly a marvel of cheapness at the price for which it is offered. We are certain that those who avail themselves of the opportunity of obtaining it get many times the worth of their money.

This volume opens with a symposium on diseases of warm climates, and it is not alone interesting but will be found of the highest utility by all American physicians who are now in the American tropical and sub-tropical possessions, not to mention our own Southern States. The spread of diseases by insects, with suggestions regarding Prophylaxis, is a well considered and carefully written article by Dr. Charles F. Mason. Following this is an account of recent progress in tropical medicine by Dr. John McCrae. Sleeping Sickness by Dr. C. Jarvis is a good account of this curious disease which occurs in the bays, Sudan, and Nganda, and is caused by the trypanosoma. The eti-

ology of Hemoglobinuria Fever by Dr. S. Kanellis and Malarial Hemoglobinuria by Dr. William Krauss are interesting contributions to the subject. Uncinariasis, by Dr. Allen J. Smith, will be read with much interest as it is awakening a great deal of attention at this time. Liver abscess and its treatment, by Mr. James Cauthie, and the diagnosis and treatment of abscess of the liver, by Mr. James Edwin Thompson, are excellent contributions to this ever interesting subject. The last article in this symposium is by Dr. Andrew Duncan on the treatment and mode of life to be pursued on return to a cold climate by those suffering from the common affections incidental to a sojourn in tropical countries. This is a very important subject and an instructive article.

In the section devoted to Treatment we find two very important contributions. One of these is on the Etiology, Diagnosis and Treatment of Arteriosclerosis, by Dr. John Benjamin Nichols. The other deals with the significance and treatment of the gastro-intestinal form of arteriosclerosis, by Dr. Walter L. Biering. In the section of Medicine are to be mentioned among other articles Neurotic Asthma by Dr. William H. Katzenbach and Osteomalacia by Dr. Geo. E. Malsbary. In the section of Surgery we particularly note Ankylosed Joints and their Nonoperative Treatment by Dr. J. Torrance Rugh, Intestinal Obstruction in children by Dr. Charles Green Cumston, and Supraparietal Injuries of the Kidney by Dr. Miles F. Porter. Pediatrics represented by an article on Bronchopneumonia in Children by Dr. Isaac A. Abt, and Rhinology by one on Nasal Obstruction by Dr. Francis J. Quinlan.

We have not the space at our disposal to give a complete review of even a part of the articles in this volume, but from the little we have mentioned our readers may form an opinion of how valuable and interesting this latest issue of *International Clinics* is. We cannot close without reiterating our recommendation to all medical men who desire to be abreast of the times and get a closer acquaintance with modern leaders in medicine to subscribe to and read these volumes as they appear.

Modern Ophthalmology. A Practical Treatise on the Anatomy, Physiology, and Diseases of the Eye. By JAMES MOORES BALL, M.D. Royal 8vo. pp. 820. With 418 Illustrations in the Text and Numerous Figures on 21 Colored Plates. [Philadelphia: F. A. Davis Company. 1904. Price, cloth, \$7.00 net; half-morocco, \$8.50.]

As a complete, practical one-volume treatise on the eye we are unacquainted with any one superior to that before us printed in the English language. The author has been eminently successful in the production of a work that is not only clear and comprehensive but thorough as well. The style of

its method of handling the subject is logical and consistent. It is so constructed that any chapter may be read independently of the others or a logical sequence may be obtained by reading it from beginning to end. By this means it serves the double purpose of being a comprehensive text-book or a book of reference. To sum up the qualities of this really valuable work, it may be looked upon as a book valuable to the student, useful to the practitioner, and interesting to the oculist. It is not a mere condensation of the views of other writers, but is full of the ideas and operative methods of its author and possesses a certain amount of individuality inseparably connected with the writer of this meritorious work. In fine, it reflects credit not alone upon him but American Ophthalmology and more particularly upon St. Louis.

The author begins the work by a good description of the embryology, anatomy and physiology of the eye. He then leads his reader by gradual steps to a systematic consideration of the examination of the eye, this including the external examination of the eye and ophthalmology. In the next succeeding chapter we are given a very good description of the diseases of the eyelids, as well as injuries of and operations on the eyelids. The portion devoted to the skin diseases of the eyelids is without doubt the most thorough and complete which has yet appeared in any work on ophthalmology, and will prove of no little assistance to all those who read this chapter. The succeeding chapter on diseases of the lachrymal gland, although short, is very excellent. The diseases, defects and anomalies of every part as well as function of the eye are taken up in what may be termed an anatomical order. The author has spared no pains to make his treatise a thorough one and he has been very explicit in the descriptions of operations and thorough in their illustration. It is certainly in this part that he excels.

The two last chapters are respectively devoted to the hygiene of the eyes and methods employed in the microscopic examination of the eye. The latter will certainly waken much interest, more especially in those who are engaged in this sort of work. The directions given are very explicit, the descriptions plain, and the methods not too difficult. To sum up, it, like the other chapters, is both scientific and practical.

One of the points of prominence connected with this excellent treatise is the profuseness of illustrations. These are all of a superior character whether colored or in monochrome. The colored illustrations are especially true in their tints and shadings. Taken altogether the work is a veritable *édition de luxe* so far as paper, printing, illustration and binding are concerned. The publishers have certainly been very liberal in this respect and they have succeeded in producing a book in which they can

certainly feel a just pride. We are sure that they have done the author justice, but not more than he deserves. We feel assured that this work will not have been on the market long before there is a call for a second edition. We can unhesitatingly recommend this treatise to students, practitioners and oculists as being a book of superior worth.

The Doctor's Leisure Hour. Facts and Fancies of Interest to the Doctor and his Patient. Arranged by PORTER DAVIES, M.D. CHARLES WELLS MOULTON, General Editor. [Akron, O.: The Saalfeld Publishing Co. 1904. Price, cloth, \$2.50; half-morocco, \$4.00. Sold by subscription.

If there is any inherent quality in the medical profession it is the capacity of being able to laugh heartily and enjoy a good story. The volume before us is the first one of a dozen which will be issued by the publishers, and each volume being written by a different author and a medical man we have no doubt whatever that it will be a success from its very inception. All the contributors have made a determined effort to make the series a success, and judging from the volume before us we are certain that it will be such. The series is aptly named and the subject matter is certainly the kind that is best adapted to relieve the many little cares and worries that are on the mind of every practicing physician; for no matter how cynical he may appear to others, he still retains that little bit of the human which was born in him and which he can never successfully throw off completely, if he's but honest to himself.

The first volume is a very carefully arranged compilation of jokes, short stories and verse in which doctors and patients are the dramatis personæ. The entire contents are systematically arranged under different heads, such as the student, the professor, the diagnosis, etc. It is very interesting and, above all, it lends itself to cheerfulness, exemplifying fully the truth of the distich:

"A little nonsense now and then
Is relished by the wisest men."

We could hardly be expected to write an analytic review of a volume like that before us except in the way of praise to the compiler for his good judgment and excellent taste in the selections he has made.

The volume itself is a veritable *édition de luxe*. It has gilt top, uncut leaves and is well and artistically bound. In the present volume are to be found four plates all artistically executed and enhancing the beautiful typography of the book. These plates are respectively entitled: The Pride of the Family, A Bride, At the Dentist's and An Irish Patient. We are certain that any one seeing this volume will want a copy, be he

doctor or layman. We shall certainly see to it that no one appreciates our copy as much as we do. The publishers inform us that they intend to issue a volume of the series every month, so that it will take a year to complete it. Any physician can afford to buy the series in view of the fact that it is issued at such a moderate price. And any one should be willing to pay ten times as much for the pleasure it will afford him. The publishers are certainly to be congratulated upon their success.

Uric Acid. An Epitome of the Subject. By ALEXANDER HAIG, M.A., M.D., Oxon, F.R.C.P. 8vo. pp. 158. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

The epitome before us, the author informs us, was written for a number of professional friends and for students. It is a condensation of the author's larger work, "Uric Acid as a Factor in the Causation of Disease," which we had occasion to review sometimes since in the JOURNAL. He carefully analyzes the effects of uric acid in the circulation and is, on the whole, opposed to medication. He considers a dietary treatment as one superior to any other. Man he looks upon as a frugiverous animal whose natural diet consists of fruits and nuts, and he claims better results from this, combined with exercise and air, than from any other plan. Naturally, bread is also to be recommended as well as such articles of diet as rice, macaroni and similar foodstuffs. Meats are, of course, to be completely avoided. The author has had not only a large experience but a great amount of success as well in the treatment of conditions caused by uric acid. We can recommend this epitome to the medical profession who after reading it will certainly desire to enlarge their knowledge by a careful study of the larger work written by this author.

The book is well gotten up, printed in clear type on good paper.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

Uric Acid—An Epitome of the Subject, by Dr. Alexander Haig, M.A., M.D., Oxon, F.R.C.P. 8vo. pp. 158. [Philadelphia: P. Blakiston's Son & Co. 1904. Price \$1.00 Net.

The Doctors' Leisure Hour.—Facts and Fancies of Interest to the Doctor and his Patient. Arranged by Porter Davies, M.D.;

Charles Wells Moulton, General Editor. [Akron, O.: The Saalfeld Publishing Co. 1904. Price, cloth, \$2.50; half-morocco, \$4.00. Sold by subscription.

Modern Ophthalmology.—A practical Treatise on the Anatomy, Physiology, and Diseases of the Eye. Mr. James Moores Ball, M.D. Royal 8vo, pp. 820. With 417 Illustrations in the Text and Numerous Figures on 21 colored Plates. [Philadelphia: F. A. Davis Company. 1904. Price, cloth, \$7.00 net; half morocco, \$8.50 net.

International Clinics. A Quarterly of Illustrated Clinical Lectures and especially prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the world. Edited by A. O. J. Kelley, A.M., M.D.; Wm. Osler, M.D.; John H. Musser, M.D.; John Stewart, M.D.; John B. Murphy, M.D.; Thomas M. Rotch, M.D.; John G. Clark, M.D.; James J. Walsh, M.D.; J. W. Ballantyne, M.D.; John Harold, M.D.; Edmund Landolt, M.D.; and Richard Kretz, M.D. With Regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Vol. I., Fourteenth Series. 1904. 8vo. pp. 304. [Philadelphia: J. B. Lippincott Co. 1904. Price per volume, cloth, \$2.00; half-leather, \$2.50. Each series consists of four volumes.

The Colorado Medical Journal has inaugurated a new policy. It proposes to devote a large share of its attention to climatology and tuberculosis. The March issue was entirely devoted to tuberculosis and is one which shall certainly excite much interest and attention.

On the Farm in Old Missouri is the title of a late issue of the Continental Music Co., Broadway and 28th st., New York. It is a song with sweet music, and we have no doubt that it will achieve popularity as the "Missouri Song." The composer, a grandson of the late Judge E. V. Wilson of Knox County, is a born and bred Missourian. The song has made a hit in New York.

The Intestinal Parasites form the subject of twelve plates to be issued by Battle & Co., of St. Louis. We have received Plates I. and II. and they are certainly worthy of preservation. They are not only well drawn but accurately. Any of our readers who have not received these plates may do so by addressing a request to that effect to the above mentioned firm. The Plates so far issued represent the *Tænia Sagginata* (Unarmed Tapeworm), beef-measle and tape-measle tapeworms respectively.

Journal of the Missouri State Medical Association has just made its appearance, its initial number being dated July, 1904. The publication committee being composed of C. M. Nicholson, editor and chairman, and C. Lester Hall, F. J. Lutz, Woodson Moss, M. F. Overholser, Robert T. Sloan, and L. A. Todd. The first issue is an octavo of 60 pages and is well printed in double column. It will be a monthly, published at the rate of \$2.00 per annum. We are told that this journal will publish the transactions of the State Association and, in addition, those of affiliated county societies. The publication office is located at 534 N. Vandeventer Ave., St. Louis, Mo.

An Atlantic City Exhibit.—Speaking of the exhibits and exhibitors at the fifty-fifth annual meeting of the American Medical Association, at Atlantic City in June, the *Journal of the American Medical Association* has the following to say regarding the medical book exhibit by Messrs. P. Blakiston's Son & Co.:

"An attractive and very instructive exhibit of standard medical, dental, pharmaceutical, chemical and allied scientific books is made by this well-known firm of publishers and book-sellers. In the binding of some of the more recent cloth books issued by this house, viz.: Montgomery's Gynecology, Edgar's Obstetrics, Tyson's Practice, etc., an interesting departure has been made from the cut-and-dried styles in vogue for many years. The result is a volume of greatly increased attractiveness and distinguishableness. Another feature, too, is noted in the exhibit of this progressive house, and that is the increase in half-morocco and the decrease in full-sheep bound books. The preference claim for the morocco binding is that it is more serviceable in every way, and permits of a more richly and better and more durably bound book."

American Medical Association.—The House proceeded to the election of officers for 1905, with the following result: President, Lewis S. McMurtry, Louisville, Ky.; Vice-Presidents, Edward Jackson, Denver; James Hall Bell, San Antonio, Texas; F. C. Shattuck, Boston; B. C. Pennington, Atlantic City; Secretary, George H. Simmons, Chicago; Treasurer, Frank Billings, Chicago; Trustees, T. J. Happel, Trenton, Tenn.; W. W. Grant, Denver; Philip Marvel, Atlantic, City. Place of meeting, Portland, Oregon. Oration on Medicine, Charles G. Stockton, Buffalo, N. Y.; Oration on Surgery, John Collins Warren, Boston; Oration on State Medicine, George Blumer, San Francisco.

MELANGE.

The Missouri State Fair.—The Fourth Annual Exhibition August 15-19, 1904. The fourth annual exhibition of the Missouri State Fair should be the most successful in the history of the institution. The dates selected do not conflict with the live stock exhibit at St. Louis, nor with any of the great State Fairs. This should assure a great live stock exhibit and an unrivaled display of agricultural and industrial products.

Missourians and Missouri exhibitors should be impressed with the importance of the State Fair and remember that it is a permanent institution destined to develop the state's resources, promote its industries, advertise its advantages, its wealth and its grandeur, for all time to come.

No unusual occurrence, regardless of its magnitude and its attractions; no entertainment for a season, however brilliant it may be, should detract from an interest in the State Fair, or cause Missourians to swerve in their loyalty to an institution that, throughout future generations, is to stand for them or their progress, and the advancement of their industrial interests.

Adrenalin in Hay Fever.—For years the malady known as hay fever has been the theme of many an able discussion. Its etiology, pathology, prophylaxis and treatment often have been the subject of study and experiment by physicians, and also by intelligent laymen. The disease has been described as a catarrhal affection of the conjunctivæ and the mucous membrane of the respiratory tract, characterized by an annual recurrence at about the same date in a given case. Another view is that the disease is a neurosis, and that the local symptoms (rhinorrhea, sensory disturbances, etc.) are due to vasomotor paralysis.

The most conspicuous symptoms of hay fever are a burning and itching sensation in the nasal region and between the eyes; violent paroxysms of sneezing; a copious discharge of serum and liquid mucus from the nasal passages; profuse lachrymation; now and then, febrile manifestations; frontal headache; and not in a few cases, some asthma.

The diagnosis having been established the subject of pre-

vention and treatment is of the utmost importance. It would be utterly useless and wearisome to attempt to review the list of remedies and the methods of treatment that have been proposed for this disorder. The interests of physicians and patients will best be served by a recital of facts respecting the most successful mode of treatment known at this time.

A glance at the list of symptoms and a brief consideration of the pathology of hay fever lead to the immediate conclusion that the chief indications are to check the discharge, allay the irritation that gives rise to the paroxysms of sneezing, reduce the turgescence of the nasal mucosa and relieve the stenosis. The only single remedy that meets these indications is Adrenalin as represented in Solution Adrenalin Chloride and Adrenalin Inhalant. By stimulating the vasomotor supply it contracts the arterioles, and thus promptly and efficiently relieves all the annoying symptoms referable to vasomotor paralysis. By its powerful astringent action upon the mucous membrane, which it blanches completely in a few moments, it controls symptoms referable to a catarrhal inflammation of that structure. Indeed the results that have been accomplished with Adrenalin in this field alone are really remarkable and of the utmost importance. Parke, Davis & Co., who market Solution Adrenalin Chloride and Adrenalin Inhalant, have prepared a very complete treatise on the topic, which contains more information than is to be found in the average text-book. They will cheerfully mail a copy of the booklet to any physician applying for it.

Kansan Ethnology.—Noting the discussion over the Lansing skull, one of the *Journal's* readers wants to know what "science has definitely determined upon with respect to the place and time of the origin of man." Science has not determined definitely upon either of these questions. At best the conclusions of science in these fields are wholly speculative, and out of the mass of contradictory opinions there is little that the world can lay hold on. For example, it is held by one school that life began at the tropics—that is, human life. But the authorities of other schools point out that this view takes no note of the condition of the earth prior to the post-pliocene or glacial period, when much of the surface was

covered with ice. Before the glacial period, they say, there were other periods with climatic conditions that would make it probable that man existed far to the north. In evidence of these climatic conditions they show that in the miocene period plants which are now found only in the temperate regions were common as far north as Greenland and Spitzbergen. The miocene period is fixed at a million or more years before the glacial period, and it was preceded by the eocene period, leaving deposits in which have been found certain flints and stone instruments that are held to indicate the contemporaneous presence of man.

When confronted with the fact that not a single human bone has been found in the deposits which contain these ancient flints, the scientists resort to a species of negative testimony to show that this fact proves nothing. Of all the skulls and fossilized portions of the human frame which have been found, there is nothing that can be held to antedate the quaternary period, which is the latest in geological history. "Yet," said Sir Charles Lyell, while arguing for the value of negative testimony, "this does not disprove the prior existence of man. When the Dutch Government drained Lake Haarlem in 1853 no sign of human beings was found. Still this lake had seen many a shipwreck and many a naval battle, and hundreds of Dutch and Spanish sailors had met there a watery grave. Old cannon were found, and coins, and wrecks of ships, but not the fragment of a human bone."

In 1900 a series of articles was published by such men as Wallace, Waddington, Miall and Maxwell to show that human life began at the poles and not at the equator. Prof. Miall declares that no other reasonable theory had been evolved to account for the presence of man in America. "At Bering Strait," says Waddington, "there probably was an isthmus joining the two continents which would enable the race to pass over into America, and would account for the fact that they were apparently in that country at an even earlier date than that at which they reached western Europe. They would also at once spread into China; and we know from the unique and primeval character of the Chinese language that there was no older race on the earth than the Chinese, and that in China

mankind may possibly have first learned to talk and develop the faculty of speech."

Still, this is but an ocean of theorizing out of a very small rivulet of fact. The mystery of the origin of man is still as unsolved as it was when the first human sat at the door of his cave in the rocks and wondered vaguely in his dawning intellect where he came from. If he appealed to the sky the arched dome of blue echoed back his question unanswered. If he appealed to the elements the wind mocked him as it rustled softly through the trees. He strove in vain to get his answer from the flashing lightning, the roaring floods, the thundering cyclone. They, too, had mysteries as unfathomable as his own. And is it strange that he dimly saw a God and built up the plan of a wonderful creation.—*Kansas City Journal*.

Human and Bovine Tuberculosis.—The views concerning the probable incommunicability of bovine tuberculosis to human beings promulgated by Koch have been subjected to the test of practical experience in the department of agriculture of the University of Aberdeen, and the results originally communicated to the Agricultural Society of Scotland have just been published in pamphlet form. They go far to disprove the startling doctrines which, if confirmed, would have displaced alimentary tuberculosis from its position as an etiological factor. The experiments, which are fully set forth, tend to prove that although human tubercle is less virulent than bovine tubercle when inoculated in the calf, infection can readily be produced thereby irrespective of the mode of inoculation and the particular source of the infective agent. The lymphatic system is invariably involved in the process, and the adjacent organs are those most affected. When administered by the mouth tuberculous spurtum induces an abdominal lymph-gland tuberculosis without necessarily involving the intestine itself, and the virulence of human tubercle is greatly enhanced by passage through the calf. The results, viewed as a whole, favor the view that the bacillus of human and bovine tubercle are identical, but are modified in certain respects by environment. These conclusions confirm the desirability of the precautions at present in vogue with regard to the milk and flesh of diseased animals and will be welcomed by those who are entrusted with the care of the public health.—*Med. Press and Circular*.

MISCELLANEOUS NOTES.

Coca a Cardiac Tonic.—Coca has been advocated by a number of observers to tone up the heart muscle. It may be employed as Vin Mariani in conjunction with the above-mentioned remedies or used alone. A unique action of Coca which renders it peculiarly fitted to the role of a heart tonic is the depurative influence it has upon the blood stream, thus enabling the muscular structure to take up the pabulum which shall give it strength. Coca is useful following a course of digitalis, and in irritable heart there is probably no better remedy. —*The Coca Leaf*, November, 1903.

Department Store Unfair Dealings.—We fully agree with M. J. Breitenbach Co., that they have accomplished something of considerable interest, not alone to the medical profession, but also to the retail druggists throughout the country. We believe that no other manufacturer ever went so "high up" in the attempt to suppress unfair dealings as carried on by the Department Store against the druggist. It will be appreciated, after learning of the suit against one or these stores, what an amount of thought and outlay is occasioned by this endeavor on their part to protect those who are legitimately engaged in the medicine business. Under the circumstances, we believe that in endeavoring to protect their rights and incidentally the rights of others, that every reader will co-operate with us in bringing the doings of these offenders to the notice of all members of the professions so vitally interested. For years trade which could not be considered as belonging to any but those who have made the drug business a life study has been encroached upon by those who are not legitimate dealers, until the great bulk of the articles dealt in by druggists, are supplied to the public by those who take away from the legitimate dealer the business which in years past rightfully was called his own. Therefore we believe that many of these Department Stores should be relieved of the delusion that the world belongs to them and they should be prevented from riding rough-shod over the rights of the many who are attempting to do legitimate business requiring years of preparation.—*Medico-Pharm. Jour.*

Neurotic Conditions in Women.—Prof. Chas. J. Vaughan, Chair of Gynæcology, Atlanta College of Physicians and Surgeons, writes: "Neuralgia constitutes the great cause of danger from the employment of hypnotics and narcotics, which only afford relief by numbing, but effect no cure. On the other hand, the formation of a drug habit rather aggravates the condition from which relief was originally sought. Neurasthenia, neuralgia and other manifestations, either of an active or passive character, are common and are always

peculiarly rebellious to treatment. Cerebro-nervous affections peculiar to women associated with pathological disturbances of the reproductive organs are legion, and most trying to physician and patient. I have found nothing so well suited to these cases as Antikamnia Tablets, administered in doses of from one to three tablets and repeated every one, two or three hours according to the attendant's judgment. These tablets afford complete relief without fostering a drug habit and their exhibition is attended with no unpleasant after-effects. For the relief of painful menstruation there is no combination of remedies so generally successful as Antikamnia & Codeine Tablets. Their sedative, analgesic and anodyne properties especially commend them in the neuralgic and congestive forms of this distressing affection."

State Board of Health of Missouri.—PRELIMINARY REQUIREMENTS. Every applicant for license to practice medicine in the State of Missouri shall present documentary evidence of having a University or College degree or High School diploma; in lieu thereof, said applicant must pass a satisfactory examination before the State Superintendent of Public Instruction upon all branches embraced in a four years' High School course.

This is an absolute requirement, and no applicant will be allowed to enter the examination without having complied with this order.

In effect after July 5th, 1904.

Dermapurine and Its Preparations.—I am much pleased with Dermapurine Soap.—J. ED. RAY, M.D., Sugar City, Colo.

Dermapurine is a splendid preparation.—JOHN H. DECHERD, M.D., Thackerville, Ind. Ter.

I used samples of Dermapurine with the most satisfactory results.—M. P. PUTNAM, M.D., Boston, Mass.

I like Dermapurine very much—gave good results.—J. B. MINER, M.D.

The first order received. I had pleasing results in a case of chloasma.—A. A. CRABBE, M.D., Traer, Iowa.

I have used Dermapurine with great satisfaction and think it a very valuable preparation.—DR. I. L. MOORE, Griffin, Ga.

Antiphlogistine in Bruises, Sprains, etc.—Bruises, sprains, and abrasions consequent upon tennis, golf, mountain climbing and other out-door sports are prevalent at this season. Infected wounds are frequent and disabling. Country life also brings the results of contact with poison ivy, poison-oak and the various venomous insects with their characteristic weapons of offense. In all these cases the physician's first thought should be Antiphlogistine. It reduces inflammation of all sorts better and more quickly than any other application, while for poisoned wounds and dermatitis venenata it is almost a specific.

Coca in Diseases of Throat and Nose.—Dr. Fauvel (of Paris), Dr. Louis Elsberg, Dr. Lennox-Browne, Dr. Morell MacKenzie, together with a host of American laryngologists, have advocated Coca, particularly specified as Vin Mariani, as a unique and important remedy in the treatment of diseases of the respiratory tract. It not only acts through its local influence as a sedative, but it is at the same time a tonic to the general system. In a beginning coryza, bronchitis or sore throat it should be taken in full dose as a hot grog at bedtime. When a liquid food is indicated, there can be no better reconstructive than a wineglassful of Vin Mariani every three hours during the day. It is an unfailing adjuvant to all known remedies.—*The Coca Leaf*, November, 1902.

Celerina in Worry, Brainfag, etc.—Brainfag, from worry, overwork or excesses of various kinds, is quickly relieved by the use of celerina in teaspoonful doses three times a day.

Sanmetto in Cystitis, Enuresis, etc.—Dr. J. L. Waffenschmidt of Cincinnati, Ohio, who graduated from Miami Med. Col. in 1892, writing, says: "My experience with Sanmetto has been pre-eminently satisfactory in all cases of irritable conditions of the urinary organs, and I prescribe it with a feeling of certainty of good results in catarrhal conditions of the pelvic organs and atonic conditions of the sexual glands. In cystitis, spermatorrhea, enuresis and loss of sexual power it is par excellence."

Akoun's Mysterious Asia and Empire of India.—The Pike's Greatest Educational and Amusement Feature, World's Fair, St. Louis, Mo. While the various concessionaires at previous expositions have endeavored to reproduce, as a midway attraction, the wonderful mysteries of the Oriental, Eastern countries, it has remained for that typical ethnological artist, Mr. Gaston Akoun, to bring before the visitors at the Louisiana Purchase Exposition an aggregation of the magnificent splendors of oriental life in the East, which for brilliancy, magnitude and active natural portrayal by means of real life exhibits has, undoubtedly, eclipsed anything in this line ever before attempted.

Mr. Akoun, who is a Parisian by birth, has the advantage of former experiences at no less than twelve previous expositions, where his marvelous successes were continuously repeated, and as a successful caterer to an amusement loving public his fame spread far and wide.

The general plan embraces a most interesting representation of Asiatic countries, including faithful reproductions of the most historic and educational buildings of India, the Mahal Temple of Agra, the Rain Sipri of Almadabad, street reproductions from historical Delhi, Calcutta with its picturesque bungalows and decorated buildings, grill workers, with their actual materials, such as mosaic and ceramic panels, carved in inlaid wood. Bazaars teeming with commercial

activity, with native vendors in the picturesque costumes of their native country, form a part of the attractions. Ceylon, with its attractive tea houses and kiosks, inside of which the visitors witness the process of drying and rolling tea, which is served by native Singalese in purely oriental fashion; Burmah, the land of the white elephants, its idolatrous inhabitants and the Golden Temple of Rangoon; Burmese musicians playing upon their peculiar native instruments and Burmese dancing girls doing their fantastical and religious dances. A point of interest is Persia, the mysterious country of Asia, with its rug markets, architectural buildings, caravans, sedan chairs, dromedaries, etc. In the bazaars are seen types of Persian traders showing the art of weaving rugs. There are brass chisellers, candy makers, fortune tellers and fakirs displaying and selling their wares, consisting of silks, draperies, laces, ornaments, embroideries, jewelry and other articles seen in course of manufacture by natives.

In connection with this special amusement feature is a beautiful and conspicuous building erected in the original Oriental style of architecture, known as the Oriental Theater, where performers from the oriental countries appear in numerous and amusing features, Nautch, Jar, Bastanette and all characteristic, national dances are given in the oriental style of their respective countries. Grand parades representing the Rajah and the gorgeous Durban festival take place hourly. On a gorgeously caparisoned elephant, driven by Hindoos, holding heavy silver spears and attended by native musicians beating tom toms and playing upon flutes and other native instruments, the Rajah is seated in a golden embroidered hoodah. Elephants carry kiosks loaded with passengers, these are followed by a multitude of singing and shouting natives, riding in every description of conveyance typical of their native countries. The entire production cost over \$200,000.

For the past two years, Mr. Akoun has had abroad special representatives in search of new attractions, and at considerable risk and expense, obtained the consent of the various tribal kings and rulers to allow their subjects to leave their native country. In the entire reproduction, there are upwards of 750 people, including men, women and children. Continuous performances given daily from 10 a. m. to 11 p. m.

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Whole No. 765.

VOLUME LXXXVII.—SEPTEMBER, 1904.—No. 3.

ORIGINAL COMMUNICATIONS.

BIETT'S COLLARETTE AND THE SATELLITÉ SYPHILIDE.*

BY A. H. OHMANN-DUMESNIL, ST. LOUIS, MO.

Syphilology is a branch of medicine which has not been permitted to grow fallow. The workers are numerous and many are the new and useful contributions which they make to this ever-interesting subject. We are ever being made acquainted with new phases of the disease and with novel conditions observed as brought about by a change or modification of environments. This is certainly a good indication of the activity which is developed in the study of this subject, and the contributions made to literature are so numerous that many seem to be destined to be overlooked or forgotten; and it is not the least important which seem to be marked for this apparent neglect. It is for this reason that we desire to call more particular attention to two syphilides but seldom mentioned at this day.

BIETT'S COLLARETTE.—This lesion was first described by Biett, the student of Cazenave, the father of French dermatology, who made such an impress upon this branch of medicine. Biett, ever an ardent student and close observer, was the first one to thoroughly describe this lesion and lay claim to his dictum that it was a pathognomonic sign of syphilis. This alone was a marked step in advance, and the importance of it was recognized by calling the lesion after the name of him who first demonstrated its importance as an aid to diagnosis. We

*Read before the Tri-State Society of Illinois, Iowa and Missouri, June 15, 1904, at St. Louis.

NOTE.—The plates have been kindly loaned by the *Regular Medical Visitor*.

have noted that within the last decade or two, syphilologists (with a few exceptions) have not accorded this sign the importance it so justly deserves, and it is in the hope of calling renewed attention to this that it will be described and its various characteristics be pointed out in the hope of preventing it from falling into unmerited oblivion.

In speaking of this lesion the idea has been more in the way of calling the attention of those not fully conversant with the subject than that of syphilologists, who are certainly well



Fig. 1. Biett's Collarette shown most distinctly at upper part of back.

acquainted with it and who need not have details rehearsed to them. But there are those who, not having sufficient emphasis placed on the matter, or who have never heard of it, are apt to have forgotten or never to have known, and to these it will prove valuable to have an added aid in formulating an exact and scientific diagnosis. We desire to engage the attention of these to the outline we propose to trace for them as they will find it of practical use and benefit in connection with a comparatively good proportion of suspected or doubtful cases which present themselves for treatment. Biett's collar-ette shows itself from two to four months after the secondary

symptoms have declared themselves, and is itself secondary in character. It is essentially superficial in character, being confined to the epidermis proper. The lesions are not numerous



Fig. 2. The Satellite Syphilide at lower part of back; one on right side and two on left side of patient. Compare with Planche 27 of Ricord's *Nouvelle Iconographie de l'Hospital des Veneriennes*, 1841.

as a rule, nor have they any fixed mode of distribution. They may be in comparatively near positions to one another, or they may be widely separated. The lesions may be located anywhere, and the trunk, upper and lower extremities are all apt to be the site of the lesion, as well as the backs of the hands and feet. The palms and soles are never the site of this syphilide, whilst it is not infrequent to observe it about the head and face. In fact, those parts of the skin which desquamate with comparative ease are most apt to show the lesion.

It is for this reason that the lesions which are under consideration are apt to occur anywhere upon the skin and for the same cause are not found upon the palms or soles. The lesion itself is, morphologically, a very flat papule nearly on a level with the skin, circular in form, and varying in diameter from a half to three-quarters of an inch. It does not infrequently happen that it has an ovalish contour, a thing that occasionally occurs in connection with round or circular lesions, in affections of the integument. The particular point which differentiates this lesion from others is the presence around it of a zone composed of thin, rather adherent, white epidermal scales which are pretty sharply defined from the normal integument. It is to this fact that the lesion owes its name of *collarete*. The scales of this zone or ring are white in color, and glisten to a certain extent. The ring itself is clear and well defined and a little more than a millimeter in width. So far as subjective symptoms are concerned there is present a very slight itching or none at all. The entire lesion is dry and painless. It does not last long and after its disappearance in its characteristic form some other form of lesion may take its place, or proper treatment may result in nothing but a macule and a consequent stain of light color remaining. It is not an unusual occurrence for the lesion to spread a certain amount after the scales have disappeared; and, it is only in such cases in which this spreading has become of a rather large size that the trouble attracts notice. As a rule, there is but little local treatment in these cases. As the lesion is usually very mild in character it often passes by unnoticed. The endeavor in the present short notice has been to call attention to a particular lesion of syphilis which is of value from the fact that it is of pathognomonic worth and, as such, is worth keeping in mind and remembering.

THE SATELLITE SYPHILIDE.—This is a lesion of syphilis which is far from being new and has not attracted much attention lately, no doubt from the fact that it is very infrequently observed. It would seem to belong to a rather old type, and like many others of this sort it is only occasionally that an opportunity offers to see it. Some very good examples are pictured in the classic atlas of Ricord, "*La Nouvelle Iconographie des Maladies Vénériennes*," published early in the for-

ties. Then it seemed to be a form of syphilide which was observed with tolerable frequency; but to-day, it seems to be but comparatively rarely seen. From a superficial examination of the literature on the subject it would appear to have been only observed in hospital patients, an experience which has been my own. A further peculiarity which I have also noted is that it does not seem to occur in women, but is rather limited to men. Whether this is inherent to the sex or is dependent upon other circumstances will be discussed later on in this paper.

The lesion consists of a large pustulo-crustaceous syphilide somewhat elevated above the level of the skin, and bearing the general characteristics of the large pustular syphilide after a crust has formed. The appearance which it presents is the same. In the lesion under discussion it forms the center of a peculiar formation which consists of a number of concentric rings, each one composed of a number of small pustular syphilides. The distance of the central lesion to the inner circle of pustules is about an inch, but may vary from half that amount to two inches. The small pustles are not distributed in one ring only, but there exists a zone about an inch or more in width in which the pustules are studded in a concentric manner. The appearance presented is a very striking one and, once seen, will never be forgotten. Care must be taken, however, not to take a circular patch of the crustaceous syphilide for this lesion, a mistake which is very apt to occur to one not well acquainted with it or its manner of manifesting itself. It is for this reason that certain details are insisted upon and it is only by close attention to these that a rapid and satisfactory diagnosis can be formulated. That this is of some importance may be judged from the fact that it is a manifestation of the late secondary period of syphilis and the treatment should be one adapted to this stage of the disease.

A question which naturally suggests itself in connection with the satellite syphilide is why it is seen to occur more frequently in males than in females. Taking for granted the view that the satellite or smaller pustules are the result of auto-infection, it would seem more reasonable to suppose that the more delicate and susceptible tissues of a female would more easily succumb to infection than those of a male. Whilst this

appears plausible, a closer examination of the conditions present will afford a ready explanation of this apparent paradox. The tissues of males are really more susceptible and weaker than those of females. This is due to the fact that males are much more prone to indulge in excesses, and to thus bring down their tissues to below par. Excessive indulgence in alcoholics, loss of rest, artificial excitement and a total disregard of the rules of hygiene will ultimately undermine the strongest constitution. Females, on the other hand, are not, as a rule, so disregardful of hygienic measures, and their nature is such that, as a general rule, they will not continue to be guilty of excesses. Thus their tissues are more resistant and we do not see them affected by such large and destructive lesions as are observed in men living on the same social level as they do. This will serve to explain in part what might at first blush appear to be an anomaly.

In conclusion, the writer desires to remark that the two syphilitic manifestations just hastily sketched are certainly deserving of being closely observed and will be found to be much more interesting than a mere casual look would indicate. This very careful observation will enable the physician to make a diagnosis with confidence and arm him with that confidence which is born of positive knowledge. A mere description, of course, can never equal a clinical demonstration, but poor satisfaction as it is, it still contains the germs of those things which will eventually become fruitful. The object of the writer will have been fulfilled if he has been fortunate enough to draw the attention of some of his readers to the syphilitic lesions described.

The Mississippi Valley Medical Association will hold its annual meeting in Cincinnati on October 11, 12, and 13, at the Grand Hotel, under the presidency of Dr. Hugh T. Patrick of Chicago. The secretary of the association is Dr. Henry Enos Tuley, 111 W. Kentucky Street, Louisville, Ky. The executive committee is composed of Drs. B. M. Ricketts, chairman, H. J. Whitacre, and M. L. Heidingsfeld, of Cincinnati.

THE PATHOLOGY AND TREATMENT OF DIABETES MELLITUS.

BY DR. A. D. BARR, CAVE CITY, ARK.

The idea has been advanced recently, that diabetes mellitus is a disease of the pancreas. That this is always so I am not prepared to believe, for undoubtedly it is sometimes due to an irritation of the brain; and again it may be caused by a diseased condition of the liver, in which the glycogen of that organ is increased in an undue amount. The question of what becomes of the sugar found in the venous circulation, and how it is disposed of, is one that has never been, until now, clearly and satisfactorily answered. In order to understand any pathological question we must first understand the physiological situation which the pathological supersedes. This brings us to consider the real digestion of sugar. Physiologists have heretofore considered sugar as being absorbed directly from the stomach and intestines, into the blood, unaltered by the action of the gastric or intestinal juices. That it is unacted upon by the pepsin in the stomach is without doubt true, but in regard to intestinal digestion, I have demonstrated time and again that it is not true.

When sugar comes in contact with the intestinal juices it is first converted into alcohol and then into acetic acid; whether or not the alcohol formed in the intestines is converted into acetic acid in the intestines I am not prepared at present to say, but am inclined to think that it is to a limited degree, at least.

Undoubtedly the greater part of the alcohol formed from the sugar in intestinal digestion is absorbed as alcohol and is farther split up in the system. The pancreas is the organ that produces the special ferment that converts sugar into alcohol, as well as digests proteids, converts starch into sugar and emulsifies fats.

I have separated a special pancreatic ferment that is very active and will ferment by far more sugar in an alkaline medium than yeast will under the ordinary conditions of alcoholic fermentation. In fact the amount of sugar and water used seems to have no relation to each other, as this ferment first converts the sugar into alcohol and then into acetic acid, which process goes on until the whole of the sugar is used; the

only thing necessary to carry on the process is to maintain an alkaline medium which of course neutralizes the acid, and thus the process can be continued indefinitely by the addition of sugar.

To demonstrate the power of this pancreatin to cause alcoholic fermentation in an alkaline medium: dissolve two drachms of sugar in six or eight ounces of water rendered alkaline by the addition of bicarbonate of soda, then add five or six grains of the ferment, and maintain at a temperature of 100 degrees F. In a few hours the fluid will have assumed a milky appearance, and in a short time longer carbon dioxide will be given off and alcohol will be formed and then converted into acetic acid. The solution is usually acid in reaction in twenty-four hours, and upon distillation alcohol is obtained.

I have obtained this special ferment from an extract of the fresh pancreas of hogs, sheep and cattle. This explains the digestion of sugar in the intestines.

The next question is: how is the sugar contained in the venous blood disposed of? It is done by the same ferment being absorbed into the blood, where it comes in contact with the sugar in an alkaline medium, and readily converts it into alcohol and acids. It may be objected that the time is too short as there is no sugar present, normally, in the arterial blood.

To this I will answer that the ferment is constantly being absorbed along with the products of digestion, and is present in the blood in considerable quantities compared to the amount of sugar.

And again this ferment rapidly converts sugar into a gelatinous-like substance, which will not show any of the chemical reactions of sugar.

It appears reasonable that diabetes mellitus is caused in most cases from a lack of this ferment to convert the sugar and the glycogen of the system into alcohol and acids.

Therefore the most scientific treatment consists in the administration of the special ferment that the system fails to produce.

This ferment is not affected by the acids of the stomach, except the hydrochloric acid precipitates it, but it is again rendered soluble by the action of alkalies. Its therapeutic

effect seems to be increased sometimes by the administration of a sufficient amount of bicarbonate of soda to render the stomach alkaline.

As a certain amount of alcohol is normally present in the system, alcohol is also a valuable remedy. It must not be understood that this is the only treatment to be employed, but it is the most important of any treatment to supply the system with its physiological demands.

For several months I suffered with diabetes mellitus and I found an almost immediate disappearance of the sugar from my urine after taking several doses of this special pancreatic ferment.

SOLUBLE MERCURIALS IN THE TREATMENT OF SYPHILIS.

BY GEO. W. TOBIAS, M.D., NEW YORK.

It has been found in practice, that the formula for the so-called "specific" bin-iodized oil, adopted by Profs. Panas, Dieulafoy, Lancereaux, Brissaud, Fournier and other leading French specialists for diseases of the skin, was far too weak for the mercurial treatment of syphilis. Nevertheless, there has been a growing demand for this oil, because it is not irritating to the stomach, and used hypodermically is preferable to the insoluble mercurials (calomel, tannate of mercury, etc.)

The assimilation and subsequent elimination of these injections of insoluble salts of mercury is always uncertain and unsatisfactory, and they frequently produce abscesses, and always cause considerable shock to the patient.

Since Ricord's time, the proto-iodide has been the favorite internal treatment. It is preferable to bi-chloride of mercury, because the latter attacks the living tissue, chemically uniting with it to form an albuminate of mercury, before being slowly reduced to an oxide, and finally into small globules of metallic mercury.

This reduction to metallic mercury occurs with all salts of mercury when introduced into the system in whatever form, but the *proto* salts are reduced to larger globules than the *per* or mercuric salts. The writer is of the opinion that it is not important which salt of mercury is exhibited as far as the

effects on the disease is concerned, preference however should be given to a preparation which does not attack violently the living tissues. Hence this soluble non-irritating oily solution of mercuric iodide is possessed of advantages which cannot be denied, for in the intestinal emulsification of the oil, the infinitesimal sub-divided mercuric iodide comes in contact with the food contents of the alimentary canal, and any caustic action is exercised on these rather than on mucous membranes.

In pill form, proto-iodide and calomel, as well as the red iodide of mercury, often cause considerable irritation in the alimentary canal, and even while these disadvantages may be overcome to a certain extent by the addition of small doses of opium, it is well known that opium locks up secretions, which condition is certainly undesirable in the case of syphilitics.

Dr. Chapelle, of the Paris Municipal Laboratory, finds that while the bin-iodide of mercury is only soluble in very minute quantities in oils, such as almond, olive, etc., that if the mercuric iodide is formed in the oil itself, it dissolves in its nascent condition and remains in solution. A one per cent. solution of nascent mercuric iodide is a convenient and permanent strength. While of course this mercuric iodide in oil acts like all other mercurials as an anti-syphilitic, it never salivates or produces the slightest irritation in the alimentary canal.

This oil may be given either in the form of capsules of four minims each (which is equivalent to one thirty-second of a grain) or injected hypodermically. Clinical experience shows that its effects are the same as mercury by inunctions, or of any of the mercurial salts when administered by the stomach or hypodermically, and its use can be continued indefinitely, without requiring intervals of repose. Blood tests thoroughly prove that patients do not become anemic when this bin-iodized oil is long continued, even in heroic doses, and while the capsules gradually bring the patient under the influence of mercury, the hypodermic injections are very prompt in their effects on gummas and other tertiary symptoms.

This one per cent. solution of mercuric iodide in oil, is now unusually prescribed under the name of cypridol, which does not betray the fact to the laity, that mercury is being administered.

All the disadvantages which are unavoidable with the

soluble and insoluble mercurial preparations are avoided with cypridol dispensed in capsules. These do not affect the digestive organs or salivate even in massive doses. The injections of cypridol are quite painless. Eight minims is considered a normal injection, and this dose can be repeated every day if desired.

TECHNIQUE.—The needle should be introduced deeply into the gluteal muscles, and a short interval allowed to elapse before the cypridol is injected, in order to see if any blood exudes. If there is blood, no injection should be made at this point, as there is danger of pulmonary embolism.

In my somewhat extensive clinical experience with cypridol, I find but one objection. It is, that the symptoms often subside too quickly, and with syphilitic patients it is difficult to persuade them to continue the treatment unless accidents re-occur.

AN OBSTINATE CASE OF GOUTY ECZEMA.

BY E. FOUCAULT, M.D., PARIS, FRANCE.

This case is interesting inasmuch as the patient, who had called me in to treat an acute attack of gout, did not then mention the fact that he had, as he told me afterwards, "a chronic skin disease since he was 23 years old."

History: Patient, Mr. F., aet. 49, well nourished, no family history of gout, had dieted for years (on advice of dermatologists whom he had consulted in Europe and in this country, for his skin affection). He had a previous attack of acute gout a year before. There was some tendency to obesity and varicose veins. He was suffering from a severe attack of gout and I put him on the usual treatment, viz.: colchi-sal capsules in full doses for the first three days (16 capsules daily), and recommended him to reduce the dose to four capsules daily as soon as the severe pain and inflammation around the articulations were removed.

Saline purgatives were prescribed to be continued for a week at least. He responded nicely to this treatment on the third day, when I recommended him to continue the colchi-sal in doses of four capsules daily for a week and to take four during one day each week for some time, to prevent a return of

the symptoms. My patient on this occasion showed me his arms and chest, which were almost raw and so covered with old scars that it was almost impossible to say from what form of skin disease he was suffering. These scars he complained came from the intolerable itching, owing to the heat of the bed clothes, which compelled him to scratch himself in the night. This condition he had long come to look on as a part and parcel of his daily cross, for while at times he was less troubled than others, he was never free from it and he despaired of a cure, since all treatments had failed to relieve him permanently. Severe diet seemed to be the only effective method of getting relief.

Since he had seen so many well known authorities, who must have recognized the gouty nature of the eczema, I hardly expected to be more fortunate, and I prescribed simply solutions of bicarbonate of soda to be applied and a little zinc ointment to the abrasions caused by the scratching. A week later my patient came to my office, delighted at what he called my "cure". The irritation had entirely left him for the first time in 26 years, and up to the date of writing (which is eight months since he began to take colchi-sal) there has been no return of the gouty eczema. His skin is free from redness or even signs of urticaria, but during this period he has had two slight attacks of gout in the big toe, which however did not last long. The patient continues to take four capsules of colchi-sal one day of each week.

The American Medical Association in 1905.—The date set for the next session of the American Medical Association is July 11-14, 1905. This date has been decided on after considerable correspondence. The holiday season for the majority of medical men is from about the first week in July to September, and the schools have by that time all closed. Most of those who live in the east will want to utilize the trip to the association meeting as their summer vacation, and if the date were that usually adopted for the association meeting, these would not be able to attend. In July Portland has a delightful climate, and consequently there need be no fear of hot weather.—*Journal of the American Medical Association.*

A CLINIC AT THE HARVEY MEDICAL COLLEGE.

The first patient which we have for operation to-day has suffered for seventeen years from urethral stricture, and as the result of neglecting treatment he now has several strictures of very small caliber. He has been under treatment for a month, in order that we may have him in the best possible condition for the operation. He has received during this time various general tonics and urinary antiseptics. He has been carefully watched to see that he was properly dressed, and that his habits in life were regular. We now have him as a patient in good physical condition. His urine contains shreds, but it is entirely free from cloudiness. Where there is a quantity of pus in the urine, and it is cloudy as a result, you should never perform the operation of internal urethrotomy, unless it be imperative.

This patient has besides the strictured urethra, an infection of the seminal vesicles, which is chronic and probably secondary to the stricture in the deeper portion of the urethra.

The patient has a stricture in the anterior urethra as well as at the bulbo-membranous juncture, but we are going to use the Maisonneuve urethrotome alone in this case. Strictures anterior to the penoscrotal juncture are often divided with the Otis urethrotome, and in the great majority of instances it is the instrument I use in such cases, but to-day we will simplify matters by using only the Maisonneuve.

The patient is carefully cleansed and protected in these cases and all possible antiseptic precautions are taken. We will begin by passing a filiform bougie. You will notice that it meets with resistance after it has been passed but a short distance into the urethra. This is the first stricture and we will manipulate the instrument back and forth until it has passed this point of stricture. You see now that the instrument is again checked by a second stricture, and it is only after considerable manipulation that it is passed into the bladder. We will now attach our staff to the filiform. This is accomplished by the screw tip which is attached to the filiform. The filiform guides the staff into the bladder and now we are ready to pass the knife along the groove. The knife is carefully threaded into the groove, and it is then passed into the bladder. You notice the marked resistance offered by the

strictures. The knife has now been passed as far as it will go, and we will now withdraw the entire instrument from the bladder.

It is usually well to irrigate after sounding in these cases, but to-day we will dispense with the former, as the urine was quite clean and showed only a very few shreds. You notice that the bleeding is slight. We will keep the patient quiet until the bleeding has ceased, and then he will be allowed to be about. The after treatment will include the frequent use of hot formalin urethral irrigations, which with the free use of urotropin internally will minimize the reaction following this operation.

The second case will be operated upon under local anesthesia, as by so doing I think the operation will be more instructive to you. The patient has suffered a great deal for three weeks, and an inspection will show an enormous hemorrhoid prolapsed from the bowel.

You hear a great deal about internal and external hemorrhoids, but by far the most common is the kind like this one, which lies over the sphincter, and is covered both by skin and mucous membrane. This is a tumor, which is the cause of constant discomfort after it has once become inflamed, as it is neither comfortable within nor without the anus. Where a patient has a painful internal hemorrhoid he may suffer a good deal in introducing it within the sphincter, but when above the grasp of this muscle it causes no further trouble till prolapsed unless it annoy him by bleeding.

The cocainization of hemorrhoids, so that they may be operated upon without pain, when they are large and inflamed, is not easy and requires some care. This tumor you see has a base fully an inch in diameter before anything has been done to it. I will cocainize this tumor with a grain of cocain dissolved in two drams of sterile water. The needle of the syringe is carried along beneath the base of the tumor depositing the cocain as it goes. I have now carried it through the base of the tumor and am cocainizing high up about the upper attachment of the tumor. You will notice that I am not merely injecting the solution into the growth, but in great part beneath it, and well around it.

I will now finish the cocainization by thoroughly distending

the tumor in all its parts. As I insert the needle, you notice that the tumor is so tensely distended that fluid flows out around the needle and oozes from the needle punctures as it is withdrawn.

I now draw out the tumor with vulsellum forceps, and with scissors begin to cut a groove around the mass. I gradually encircle the base of the tumor and now deepen my groove, particularly from below. With my scissors I have continued to divide the attachment of the tumor until you can see in the portion not divided several vessels which would bleed freely if divided. I now with fine catgut tie off this narrow base in three sections. You notice that I tie my ligatures only lightly as strong traction on these fine gut ligatures would cause them to break. I now cut off my tumor outside my ligatures. You will notice that I never had any amount of bleeding, so that my field has never been obscured so much as to require sponging. I will now put in a fine gut suture to control the oozing which we have, and which might become worse after the effect of the cocain has worn off.

You notice that the patient has never complained of a particle of pain, and that although I have worked with perfect deliberation he has never flinched. I have taken this course in order that I might teach you several points regarding this work.

First of all you have seen a method which can be practiced in an office without difficulty, if you have a table in which you can hold the patient in the lithotomy position. After thorough cocainization of the mass you can draw it down outside the grasp of the sphincter without divulsion of this muscle. Then by working deliberately we can remove one of these tumors no matter how large, and can control all bleeding by properly applied ligatures and sutures without the need of an assistant. The base of the hemorrhoid would have bled freely should we have merely cut it away, and then we would have needed someone to mop away the blood while we were suturing.

You hear a good deal about saving the mucosa and skin over the hemorrhoid. That is a bit of nonsense, for the mucosa is badly diseased as you can easily see, and you noticed that I had no difficulty in drawing the loose tissues together from

above and below. Leaving this old redundant diseased mucosa is uncalled for.

You might think by seeing this work, that you could go out in general practice and operate under general anesthesia and use this method of suturing. As you know, I recommend the ligature operations under those circumstances, and I want you to remember why.

If you are a general practitioner and go out to operate upon hemorrhoids, you will almost invariably be content with one assistant, and you will use him as an anesthetist. Now unless you carry a special table, you will have to place your patient in Sims' posture. After you have divulsed the sphincter you can draw down a hemorrhoid and cut a groove around it without an assistant, and then it is easy to throw a ligature around the stump and tie it before cutting away the mass. If you wanted to do a suture operation you would need someone to hold apart the buttocks, and if you do the suture operation a few times you will find now and then a case where it is not perfectly easy to control the bleeding by the sutures, and they have to be placed with considerable care to accomplish the desired result.

Many plans of suturing have been recommended, and each operator recommending such has felt it incumbent upon himself to condemn the clamp and cautery and the ligature operations. As a matter of fact both these methods are very satisfactory, and I have yet to see any man who is able to demonstrate really superior results from the suture operations. The clamp and cautery is best used in the hospital, because of the need of assistants and because it does not offer the great security against hemorrhage, as does the ligature operation.

The Rocky Mountain Interstate Medical Association will hold its sixth annual meeting at Denver, on September 6 and 7, under the presidency of Dr. H. D. Niles of Salt Lake.

SOCIETY PROCEEDINGS.

CLINICAL SOCIETY OF THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

Stated Meeting held November 2, 1903.

The President, Dr. J. H. Burtenshaw, in the Chair.

RUPTURE OF THE URETHRA.

This patient was presented by Dr. C. H. Chetwood. The boy, nine years old, fell astride the edge of a barrel. The accident was immediately followed by swelling and ecchymosis of the perineum and scrotum, which extended down the inner sides of the thighs. On examination the bladder could be felt slightly distended toward the brim of the pelvis. Gentle effort to introduce a soft rubber catheter was unsuccessful. The diagnosis was complete or incomplete rupture of the urethra. The patient was anesthetized, but it was impossible to obtain entrance to the bladder through urethra. Perineal section was then performed. The distal end of the tube was found without difficulty, but not until the perineal opening was distended with boric-acid solution was it possible to distinguish and grasp the proximal end. The ends were sutured together and a small catheter introduced through the perineal wound. Three days later the catheter was removed, and the patient urinated without trouble. Twenty-four hours later, under anesthesia, a catheter was passed through the meatus into the bladder and tied there for three days. At the end of two weeks cure was complete.

PROSTATIC HYPERTROPHY AFTER GALVANO-PROSTATOMY (CHETWOOD).

This patient was also shown by Dr. Chetwood. The man was 63 years of age, a peddler by occupation. His principal complaint had been that he was compelled to urinate at least every half hour day and night, which was accompanied and followed by considerable pain. The speaker said that urinary symptoms of this character occurring in a man of that age would naturally suggest prostatic hypertrophy, causing vesical insufficiency and cystitis. The examination of this patient bore out this hypothesis. While the prostate proved to be only moderately enlarged, the bladder contained 7 ounces of

residual urine, and the Thompson searcher, introduced into the bladder, recognized an obstruction at the urethral orifice in the nature of a bar. Operation was performed on February 27, 1903. Perineal section, followed by digital examination of the bladder, showed a tight vesical orifice, an elevated and hypertrophied median fold and a deep *bas fond*. This bar was incised with the galvano-cautery instrument in two places, each being $\frac{3}{4}$ cm. in length, 45 seconds being allowed for each cut. A perineal tube was then introduced and left in place for five days, at which time it was removed, and in a few days the patient began to urinate through the natural channel. He was pronounced cured in three weeks. Summing up this method of operating the speaker said that it is essentially one of drainage, the aim being to effect, as nearly as possible, the reestablishment of the normal condition of bladder drainage, with the minimum amount of risk, the greatest dispatch, and without removing more of the prostate gland than is necessary in order to accomplish this purpose.

TWO CASES OF SKIN DISEASE.

Dr. Victor C. Pedersen presented two interesting cases of skin disease, one of scaling papulo-squamous syphilide, some of the lesions of which resembled psoriasis; and the other of generalized nummular psoriasis, strongly suggesting syphilis at first sight. The histories of the patients were as follows;

Case I. Male, 22 years old. Eight months ago had a chancre, which left behind the typical indurated scar on the prepuce. Nearly three months afterward a rash appeared on the skin and the man consulted a physician, who prescribed antisyphilitic remedies which were taken in an irregular manner for a short time, resulting in a more or less complete disappearance of the rash. About three weeks prior to his appearance at the New York Hospital, about the middle of October, the outbreak returned with greater virulence and wider dissemination. When first seen at the New York Hospital he presented a generalized papulo-squamous scaling rash all over the body. Some of the lesions, especially near the elbows and shoulders, were so large and the scales so numerous as to strongly suggest psoriasis. Differential diagnosis was made by the presence of typical mucous patches in the mouth and typical lesions of syphilis on the palms of both hands and soles of

both feet. Tonics, mercurial inunctions and ascending doses of the iodide of potash in about three weeks caused practically all of the small lesions to disappear and only the large ones remained. The character of these larger lesions was still somewhat suggestive of psoriasis, and the case was presented for its interest and for differentiation by the members of the Society between these two diseases.

Case II. Male, 24 years old. About five weeks before he applied for admission to the New York Hospital Out-Patient Department, a generalized scaling rash appeared all over his body. In this case the lesions were frankly those of psoriasis, but resembled those of syphilis somewhat in being comparatively small and in being scattered everywhere over the body excepting on the soles and palms. The diagnosis was made through the absence of sole and palm lesions and of lesions in the mouth, and likewise by distinctly psoriatic conditions of the backs of the hands. Three weeks of treatment had caused the scaling to practically disappear, and the color of the underlying skin had assumed a much more healthy appearance. The treatment had been simple, consisting in simple diet and regular physical exercise and ascending doses of Fowler's solution of arsenic, with chrysarobin ointment, about 10 per cent. applied to small areas of the body in turn, from night to night, and 10 per cent. boric acid ointment, applied to other parts of the skin to keep the scales as soft as possible.

Dr. F. H. Dillingham opened the discussion of Dr. Pedersen's cases. With regard to Case I., he said he thought most of the lesions were syphilitic. On the patient's back were a large number of lesions undoubtedly syphilitic, and those on the front portion of the body resembled these, but in syphilis there is atrophy or loss of tissue. Sometimes the lesion is too small to be recognized with the naked eye, but if there is loss of tissue, it cannot be psoriasis. It leaves the skin perfectly normal, except often pigmentation disappears. The speaker made a diagnosis of syphilis and psoripheal eczema of the scalp.

Dr. E. L. Keyes, Jr., said that the case reminded him of a patient, about 20 years of age, who came to him with psoriasis all over his body. The case was supposed to be psoriasis, as

the lesions were characteristic, and although the question of syphilis was brought up, there was no history and no evidence of a primary lesion. More psoriatic lesions appeared, characteristic ones on the palms of the hands and soles of the feet. This seemed to point to syphilis, and the patient was put on mercury and the lesions promptly disappeared.

Dr. Pedersen said that he had brought the patient before the Society for diagnosis because, three weeks before, when he first saw the man, he was put on syphilitic treatment and the improvement was marvelous. The morning of the meeting, however, the speaker and his colleague at the New York Hospital had failed to agree on the diagnosis, the speaker considering it syphilitic and his colleague claiming the patient presented a combined lesion.

SUBPHRENIC ABSCESS.

Dr. J. A. Bodine presented this patient, a man 35 years old, who had come to him with a previous history of pneumonia, six weeks before. The pneumonia had kept him in bed for 13 days, and he had been up and about for eight days when pain and fever returned. He was referred to the speaker with a diagnosis of encysted empyema. Sweating, emaciation and septic facies were present, and on the right lower side of the chest there was well-marked bulging. Respiratory signs were absent in this locality. To verify the diagnosis, a hypodermic syringe was inserted in the upper part of the bulging mass, between the seventh and eighth ribs, and pus was withdrawn. A section of one and one-half inches was made in the ninth rib, care being taken not to go through the diaphragm. There was no pus, but the liver and diaphragm could be felt intervening. The needle was inserted again, between the seventh and eighth ribs, and pus was withdrawn. A second incision was made at this point, and when the pleura was reached six or eight ounces of clear serous fluid was found. When the finger was inserted into the second opening a dome-shaped mass was found rising over the liver. The lower border of the lung was defined and a fluctuant subdiaphragmatic abscess diagnosed. The diaphragm was incised with a knife and eight or ten ounces of pus withdrawn. A drainage tube was carried through the lower wound. The fever has entirely disappeared and the patient is on the road to recovery.

Dr. Morris Manges said that to make a positive diagnosis in these cases is impossible. Absence of pneumococci might have given the clue to the origin of the subphrenic abscess. There is no part of the body in which one is more liable to err than in the lower portion of the pleural cavity in the recognition of fluid. There is nothing which fluid cannot simulate. It was Leyden who pointed this out, in 1887, and gave to it the name pyothorax subphrenicus. Since then a number of cases have been reported as secondary to pneumonia, but in such cases pneumococci are usually found in the pus from the subphrenic abscess. Another condition which makes differential diagnosis difficult is abscess of the liver as differentiating this same condition from secondary effusion into the pleural cavity. In almost every case one finds the localized point of tenderness over the liver, and this indicates where the aspirating needle should enter. In abscess of the liver the dulness and flatness is higher in the axillary line than it is anteriorly, and respiratory conditions are present which are absent in empyema.

UNUNITED COMPOUND FRACTURE OF THE TIBIA.

Dr. L. L. Roos presented a patient who, four weeks before, had fallen in the street. Examination revealed a compound fracture of the tibia, with two simple fractures of the fibula. The patient was 67 years old, and had suffered from locomotor ataxia for eighteen years. For twelve years he was treated with silver nitrate. Four weeks after the accident there was no sign of healing in the fractures. The external wounds had become gangrenous. During his hospital experience the speaker had seen three cases of locomotor ataxia with fractures of the leg, and all three patients had been kept in bed for four five and six months, without any union resulting, and finally amputation had to be resorted to. From lying in bed for four weeks the patient was developing paresis of the bowel, and movements were induced with difficulty. Catheterization was necessary to draw urine at all. There was not even fibrous union in the fractures.

Dr. W. B. Pritchard said that there was no arbitrary rule for union in such cases. Sometimes it is impossible to obtain union, and in other cases the results are unexpectedly good. This kind of fracture is not peculiar to locomotor ataxia, but

often occurs in connection with peripheral neuritis and with multiple neuritis, and takes on exactly the same characteristics. The bones are friable, partake of the general trophic disturbance, easily fracture, and show resistance to union. These fractures do well, unless complicated. If simple there is no external disturbance of the circulation.

The paper of the evening was read by Dr. F. H. Dillingham, and was entitled

ALOPECIA AREATA,

and was, in part, as follows :

Alopecia Areota should only be used to designate a disease where the hair falls out in one or more patches which increase in size by spreading at the periphery and leave a bald area without any apparent inflammation of the skin. In a majority of cases the disease is confined to the scalp, and after the hair stops falling out the patch may remain stationary or new hairs, which are usually at first fine lanugo hairs, appear at the margin or in the patch. While the disease is progressing the hair at the margin is loose, with atrophied roots and can be easily pulled out. The skin shows no signs of inflammation, is smooth, shiny and slightly depressed. There has been a great difference of opinion as to the etiology, some claiming it to be a trophoneurosis and others parasitic. There is no question but what there are a number of cases of alopecia occurring as the result of shock or injury to a nerve, but they do not have the definite clinical history that we have in alopecia areata and should not be called such, but designated as alopecia neurotica. Simply because an area is devoid of hair it should not be called alopecia areata.

The manner of spreading at the periphery, the inflammatory process in the corium, the fact that the loss of hair does not follow a nerve distribution, and the number of epidemics reported, seem to be conclusive evidence that the disease is psorasic and slightly contagious under favorable conditions. Although a number of different organisms have been found, none of these have been proven to be the cause of the disease.

Sabouraud claims it is the same bacillus found in seborrhea, but it is also present in comedones or acne. He also claims that it only occurs after puberty, which does not explain the

many cases in children. Crocker and Hutchinson believe it to be related to ringworm, but there is no proof.

The disease which will give the most trouble in diagnosis is ringworm of the scalp, in which the patch is inflamed, the baldness is not complete, and there are the characteristic short, broken-off hairs with short ends. In doubtful cases the microscope will decide.

In favus, the yellowish crusts, incomplete baldness, inflammatory symptoms and atrophy will enable one to make a diagnosis. The prognosis is almost always good if the disease has not lasted long enough to destroy the hair follicles. If acne has been properly treated for two months and there are no lanugo hairs, the chances are the hair follicles have been destroyed and there will be permanent alopecia. If there is any defective treatment of the general health, it should be corrected, but aside from this, internal treatment is useless. Besides a large number of drugs, Roentgen rays, Finsen light and radium have been used.

Chrysarobin will give the best results in most of the cases, but it should not be used on the face or over too large a surface at one time. It is best used with vaseline, Gr. xv-3i to the ounce, and it is well not to use too strong a preparation at first. We aim to produce a mild dermatitis in order to obtain the benefit of the emigration of the white blood corpuscles and destruction of the organisms. The preparation should be thoroughly rubbed in with considerable friction every night for a week and then discontinued to see if the disease is still progressing. After the alopecia has stopped spreading, stimulating applications with massage should be used to bring an increased blood supply to the part and aid in the nutrition of the new hair.

CLINICAL SOCIETY OF THE NEW YORK POLYCLINIC
MEDICAL SCHOOL AND HOSPITAL.

Meeting held December 7, 1903.

The President, Dr. James Hawley Burtenshaw, in the Chair.

ERYTHROMELALGIA.

Dr. J. C. Lynch presented a patient suffering from red, painful extremities. About four years ago the patient had severe burning pains, first in the right and then in the left foot. The

pain was intensified by standing or walking, and several months later he noticed that the painful areas were red and swollen and that the ball of the great toe was violent after exertion. Two years ago the middle toe of the left foot was amputated because of the great pain. The toes of both feet are red; over the metatarsophalangeal articulation the skin is of a violet hue; the superficial veins are prominent and the parts are painful to pressure, but do not pit. When the feet are elevated the congestion disappears, to return when the feet are dependent. Sensibility and thermal sensation are not disturbed. The patient's condition improves during the cold weather.

The speaker said that the pathology of this condition is not well understood. Weir Mitchell considers it a vasomotor disturbance. It is probably due to a peripheral neuritis of the branches of the plantar nerves associated with diseased blood veins. Most of the cases so far recorded have occurred in men during middle life. Long hours of standing, associated with hard work, worry and exposure to various temperatures are important causative factors. Various infective diseases, such as gonorrhea, malaria, syphilis, may also be important factors. It also occurs as a symptom in certain organic diseases of the central nervous system.

Erythromelalgia may be confounded with Pick's erythromelia and the stage of local asphyxia of Raynaud's disease. In erythromelia there is a circumscribed reddening of the skin, followed by venous dilatation, confined to the extensor surface of extremity. There is absence of pain and increased surface temperature and no change on altering the position of the extremities. In Raynaud's disease, eighty per cent of those afflicted are women. It begins with local ischemia; pain may be absent or acute; it has no relation to position; it is unaffected by season. In many cases the symptoms are brought on by cold. It is anesthetic to touch, surface temperature is much lowered and there is symmetrical gangrene.

GENERAL PARALYSIS OF THE INSANE.

This patient, also presented by Dr. Lynch, illustrated the promptness with which the luetic poison attacks the central nervous system. The patient, 27 years of age, had a sore on the penis, which was cauterized, and he was given "pink tab-

lets." This treatment made him much worse and he consulted another physician, who gave him black ointment to rub in every night. He continued this for about three weeks, when his eye became sore and painful and he consulted an oculist, under whose care his eye improved, but his throat became affected. The oculist sent him to another physician, under whose care he remained for about three months, when he lost his voice. He then consulted a specialist on the throat, and continued under his care until he became demented. The essential features of his disease are that it began with a series of epileptic seizures, on recovering from which he was affected by temporary aphasia and paralysis, which disappeared in a few days and was replaced by marked mental impairment. The mental condition gradually improved, until he was prostrated by another seizure. He cries continually, wants to go to school, and is unable to answer any question intelligently.

Dr. W. B. Pritchard opened the discussion, saying, that, in his opinion, the difference between Raynaud's disease and erythromelalgia is one of degree and sometimes symptomatic, but that the essentials of the conditions are identical.

Dr. M. Packard said that these cases are much more common than is ordinarily supposed. He has seen seven of them in the Polyclinic Dispensary during the preceding summer. The pathology of erythromelalgia and Raynaud's disease is practically the same, being an obliterating endarteritis. They are all due to contraction, as Mitchell showed in 1870. Two cases of this nature in Dr. Sach's clinic developed into gangrene. In Raynaud's disease the pain is stabbing, while in erythromelalgia it is constant. Several cases of erythromelalgia were sent from the Hospital for Ruptured and Crippled with a diagnosis of flat-foot, owing to the character of the pains, and while these patients may have had flat feet, treatment by the Whitman brace only irritated the condition, due to the pressure it exerted. Cold water and potassium iodide proved effective, but the most successful agent in dilating the arteries was nitroglycerin.

Dr. Pritchard, in referring to the second patient presented by Dr. Lynch, said that he would like to call attention to a point of much interest to neurologists in the development of general paresis. Twenty years ago, if a diagnosis of general paresis

was made, it was safe to assume that the patient could not live more than two years, but to-day it is reasonably certain that he would be alive ten years from the date of the diagnosis. For this transformation the speaker knew of no explanation. Another point of interest is that some years ago, before it was safe to make a diagnosis of general paresis, the patient must have shown some symptoms of grandiose delusions, but to-day nearly fifty per cent. of the patients suffering from this disease are without any delusions of grandeur whatever, and the condition is gradually tending toward a type that will be relatively free from such delusions.

EPILEPSIA LOQUAX.

Dr. Prichard presented a patient suffering from this condition, aged 45 years. He said this was the only case of the kind he had ever seen. About nine years ago the patient began to suffer from attacks of vertigo and sudden pallor, the first of which was brought about by a shock. These attacks continued at irregular intervals for five years, when, at the onset of an attack, a spasm of the face was added to his other symptoms. He has continued to have these attacks with increasing severity up to the present time, when they assumed the type he proceeded to describe: the patient's face becomes very pale, twitching begins over the left eye (a few years ago the twitching had been over the right eye and it had been transferred to the other side of the face); then the muscles of the whole face begin to twitch, the hands become fixed, and a most profuse diarrhea of speech follows, with perfectly distinct articulation continuing for a minute and a half. This is followed by characteristic semi-coma lasting for an hour or two, when the man's condition becomes normal. There is absolute loss of memory from the occurrence of some incident preceding the pallor until the awakening. The centre of explosion in such cases, it is assumed, it is in the region of the centre of speech (Broca's convolution). Usually epileptics do not talk, yet this patient's only evidence of epilepsy is in his talking.

Dr. D. S. Dougherty said that while he had charge of the Epileptic Wards at the New York City Insane Asylum, Ward's Island, one patient would have seizures in a corner, remain rigid for a moment, and then talk incessantly for two or three

minutes, have a slight twitching, gall, and the attendants would put him to bed and he would sink into natural slumber.

ANEURISM WITH VERY UNUSUAL COLLATERAL
VENOUS CIRCULATION.

Dr. Morris Manges presented a patient for Dr. Lynch. The man was 48 years old, with the following history: He complains of pain through the chest and backbone, which is intensified on pressure. He first noticed this symptom six months ago, and it was followed, three months later, by pain over the heart and dry, brassy cough. Ten years ago he had a typical chancre. Physical examination reveals a large mass occupying the upper right part of the chest, which on palpation is seen to have some expansile pulsation. On either side of the middle line of the abdomen there is a double set of enormously dilated and tortuous veins representing a *Caput Medusæ*. Nor is this the only evidence of pressure; some of the upper veins are enlarged, also the veins of the back, especially on the left side. There is also a marked enlargement of the veins of the upper extremity, less marked on the left side. Examination of the heart shows the apex beat to be in the sixth space. Over the tumor nothing would lead one to suppose it was an aneurism except the slight expansile pulsation. One hears nothing except the heart sounds sharply accentuated. Deep palpation behind the episternal notch is negative and Oliver's sign is absent. In a case of this kind one would naturally think of an aneurism, of a gumma or other neoplasm. A new growth can be eliminated on account of the situation of this enlargement and the conclusions given. The question of gumma may be eliminated because of treatment, the patient having had iodides without any results whatever. Considering the history, the only inference would be that it is a case of sacculated aneurism filled with an enormous amount of blood-clot. As to the collateral venous circulation, one's first conclusion would be that something is obstructing the iliac veins. The speaker had recently seen two cases beginning with either obstruction of the portal circulation or of the inferior vena cava. He had seen a number of cases of obstruction of the portal circulation and of the vena cava, but ascites had been a more or less pronounced feature in most of them. The marked venous collateral circulation in this case could be explained only by the

presence of a large mass compressing both super and inferior cavæ. This would be caused by the presence of a large aneurism of the ascending aorta, of which the external evidences are to be seen in the sternal tumor. The fact that there are so few symptoms is caused by the aneurismal sac being filled with very thick layer of organized blood-clot.

Dr. R. H. M. Dawbarn said that this case was particularly interesting because of the anastomoses. He had never before seen so typical an instance of the *Caput Medusæ*. He said that there were a dozen ways whereby the venous blood may, in obstruction of the portal vein's exit, pass the liver and reenter the inferior vena cava. In his opinion, a more important one of these in accounting for the *Caput Medusæ* than the instance mentioned by the speaker is the circulation from the liver to the belly-wall, through the reopened umbilical vein of fetal life. In about twenty per cent. of such cases, this cord again becomes a vein. In the case of the patient before the Society, he thought that perhaps a small gumma of the liver in the region of the portal vein might account for the venous distention. Much larger doses of potassium iodide must be given before one could eliminate it as a cause. The fact of it being an aneurism would point somewhat toward tertiary syphilis, but so frequently is the cause of producing atheroma of the arterial walls. He did not consider the absence of ascites, even with great portal venous stasis, as effectually destroying the diagnosis of a gumma of the liver.

Dr. Albert Kohn said that he was impressed with the lack of symptoms of aneurism, even though the mass were filled with blood clots. Pulsation was very slight. The hypertrophy of the heart might be explained by arterial sclerosis of specific origin. Undoubtedly there was pressure on some of the larger trunks supplying the upper extremities, but before making a diagnosis it should be considered that the treatment had not proved anything. The patient should have iodides in increasing doses, up to 100 or 200 grains a day, or even more, and injections of bichloride of mercury and salicylate of mercury. Very often injections of mercury will give results when iodides have absolutely no effect.

Dr. Packard suggested that the venous varicosities on the chest and abdomen were due to pressure on the internal

mammary vein, with an anastomosis of the superficial epigastric.

Dr. Manges said that he still thought it was an aneurism. If it were a gumma also it would have eroded the ribs or the sternum.

DISPLACED LIVER AND KIDNEY.

Dr. Kohn presented a case of displaced liver and kidney. The patient, when she first appeared at the clinic, two years ago, gave a history of what was then diagnosed as colelithiasis. The gall-bladder could be distinctly felt. Some time ago she again presented herself, and on examination the liver was found to extend down to the umbilicus and the dulness to begin at the eighth space. On making a slight palpation over the edge of the liver the gall-bladder was found beneath the edge. The kidney could be felt displaced into the right iliac fossa. The entire process had occurred within the last two years.

Dr. Brooks H. Wells said he had had a similar case in which a diagnosis of fibroid uterus had been made. Upon examination, the upper edge of the liver was found to be two inches above the umbilicus. He made a median incision from the lower edge of the liver, got hold of the round ligament at its insertion into the liver, passed a suture of kangaroo tendon over it, so placed that it could be pulled back and forth, and then pushed the liver into its proper place. The patient made an uncomplicated convalescence.

GALL-STONE ILEUS.

Dr. Manges presented specimens from this case. The patient was a man of 58, who a few months before had had an attack which his physician had considered to be appendicitis. About a week before he was seen by Dr. Manges he had abdominal pain and severe attacks of vomiting at irregular intervals, and there was no movement of the bowels for about a week. On the day he was seen he had a movement following cathartics and enema, but in spite of this the vomiting, which by this time had become more or less constant, did not abate. The vomiting was characteristically fecal. There was no fever, nor was there at any time evidence of jaundice. Examination of the abdomen revealed nothing but a vaguely defined mass in the right hypochondrium. There was no in-

creased peristalsis nor was there any evidence of distension. The introduction of a stomach tube brought up very large quantities of fecal material, acid in reaction. A fairly thorough lavage gave the patient great comfort for twenty-four hours. Recurrence of the vomiting, however, on the following day rendered exploration for an unrelieved abdominal obstruction advisable. The operation was performed by Dr. Lilianthal, an incision being made over the right side of a vaguely defined tumor in the right hypochondrium. A pus cavity was encountered and in this area a number of various sized gall-stones were removed, followed by drainage of the wound. The patient's condition at the time of operation had been desperate and was not improved by the operation, death occurring on the following day. At the autopsy one very large stone and several smaller stones were found high up in the duodenum, the largest stones being over an inch and a half in diameter, practically filling the lumen of the duodenum. Very dense adhesions bound down the gall-bladder and duodenum to the stomach. The gall-bladder was very much thickened, and at its lower portion was a large opening communicating with the duodenum. It was through this opening, undoubtedly, that the stone had escaped into the duodenum. Dr. Manges closed his presentation with a brief discussion of the rarity of gall-stone ileus and some of the features of its differential diagnosis.

The paper of the evening, on

ACUTE EDEMA OF THE LUNGS SECONDARY TO ETHER
NARCOSIS; RECOVERY

was read by Dr. V. C. Pedersen, who said, in part: The patient was thirty years old, healthy. Immediately after a thirty-minute administration of ether for an operation of piles, he developed acute edema of the lungs which very nearly proved fatal. The induction of anesthesia caused great excitement and muscular rigidity in the extremities, which persisted about ten minutes. During that time the ether was administered rather freely but not excessively, in so far that less than four ounces was poured into the cone during the entire operation. The clinical picture of the edema was made up of profound cyanosis followed by cardiac weakness, but was not accompanied

or followed by any mucus of the mouth, nose or throat. The resuscitation was accomplished by free use of cardiac stimulants, notably strychnine, whiskey and nitroglycerin and other respiratory stimulants like atropin, and elevation of the foot of the bed. General dry cupping of the chest was also instituted, and after about one hour of constant work over the patient recovery took place, without however the appearance of any fluid in the throat from the lungs. No later lung complications occurred.

The speaker stated that some twelve cases of a similar nature have been reported in medical literature, all of them fatal, and many of them showing, as in this case, an insidious onset at the end of the operation, notwithstanding the fact the anesthetization had been without incident. He thought this case worthy of publication for the reason that it illustrated the fact that certain persons are individually very susceptible to ether-fumes, the gas being irritating to the lungs. He therefore holds that whenever any difficulty appears in the early stages of anesthesia with ether, great caution and deliberation should be exercised in overcoming them. He stated that, in his opinion, aside from the very important factor of individual susceptibility, this case of edema may have been due to somewhat undue exhibition of ether early in the narcosis, although, after all, the total of ether exhibited (less than four ounces) proved that this excess had not been very material.

Dr. Pedersen also presented a chloroform dropper which he had designed with the purpose of regulating the size of the drop allowed to flow from the tube which was inserted in the stopper. A large, small or medium drop could be allowed to fall on the mask, and at more or less frequent intervals, according to the desire of the anesthetist.

He also exhibited a new device for attachment to Bennett's ether apparatus, designed to greatly facilitate anesthetization in cases of operation on the larynx and trachea.

Dr. T. L. Bennett opened the discussion of Pedersen's paper. He said that pulmonary edema following the administration of ether is not a common occurrence. He had seen three or four cases in which this condition had been present in lesser degrees than in the case reported by Dr. Pedersen. The morbid anatomy of pulmonary edema is very likely that of congestion of the lungs, similar to that seen in the pleural cavity. Some

patients are susceptible to pulmonary edema, as, for instance, those inclined to congestion of the lungs or those having tuberculosis. The anesthetist should be on his guard to notice any failure of the left side of the heart, either from weakness or from complications of the aortic valves or from aortic stenosis. The congestion from ether is usually sudden, but the edema may be quickly developed or it may not become apparent until the administration is stopped. In the case reported by Dr. Pedersen, partial edema of the lungs probably occurred during the early administration of ether, and when the ether was stopped a certain amount of stimulation was withdrawn, and the consequent depression favored the development of the edema. Whenever, during inhalation, the patient presents symptoms of cyanosis, he should be examined for edema, notwithstanding that his inhalation may be free. There is usually a rapid pulse, and the patient, if in an excessive case, will expel mucus from the cavities. In the treatment, prophylaxis is the most important feature. The ether should not be pushed so rapidly as to set up this congestion. The anesthetic should be changed as soon as the first symptoms are noticed, and it should be given in very small quantities, so that the patient may cough or vomit and so expel what is in the lungs. Strychnin should be given for stimulation. Artificial respiration, with oxygen, preferably, does much to start the circulation and may expel the fluid from the chest and lungs.

Dr. Pedersen said that he thought the choice of an anesthetic should depend to a great extent on the personal equation. He had recently administered ether to two patients who had suffered from bronchitis previous to the time of operation. The anesthetic, in both instances, had been chosen by the operator. The first patient was given ether, and developed a bronchial pneumonia, but did not die. The other patient was a man for whom the operator requested chloroform. Ether was administered, but he became cyanotic, and chloroform was substituted. He got through the remainder of the operation without difficulty, and made a good recovery.

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EDITORIAL.

THE TREATMENT OF SUMMER DIARRHEA.

In the treatment of any form of diarrhea an accurate diagnosis must first be made. For convenience it is customary to classify diarrheas somewhat after this fashion: 1, Diarrhea of relaxation, or serous diarrhea, due to disordered innervation; 2, Crapulous or lenteric diarrhea, due to imperfect digestion; 3, Catarrhal diarrhea, acute or chronic; and 4, Ulcerative diarrhea, due to intestinal ulceration.

This classification is by no means perfect, as is shown by the multiplicity of terms applied to the various pathologic states characterized by diarrhea. Thus we have the terms acute inflammatory diarrhea, acute summer diarrhea, choleraic diarrhea, dysenteric diarrhea, nervous diarrhea, tuberculous diarrhea, etc. In each case the diagnosis is determined by the actual condition prevailing, of which the intestinal laxity is usually but a prominent symptom.

The question of treatment is one of the utmost importance. Without entering into a discussion of what soon proves to be a very broad subject, it may be worth our while to consider briefly the status of the antiseptic method of treating intestinal disorders, especially those caused by pathologic organisms and of which diarrhea is the chief symptom. Apart from well-directed efforts to clear the intestine of bacteria, reduce the temperature, sustain the vitality of the patient, regulate the diet, secure proper hygienic conditions, rest, and good care, the selection of the proper antiseptic agent demands the exercise of the physician's best judgment.

Whether or not it be possible to attain intestinal asepsis is of course a debatable question, but it is a well-established clinical fact that intestinal antiseptics do good and modify the course of enteric diseases of bacterial origin, notably typhoid fever, dysentery and summer diarrhea. However, there is a difference in the degree of efficiency of the various antiseptics, the utility of many being limited by the risk of untoward action from excessive dosage. In those cases of ileo-colitis caused by the bacillus of Shiga many of the serious symptoms are due to a mixed infection, to combat which prompt and vigorous measures are required.

The experiments of Novy and Freer (*Contributions to Medical Research*, p. 114) with benzoyl-acetyl-peroxide (acetozone) showed that this substance is extremely germicidal to the organisms found in the alimentary canal. Its administration to rabbits resulted in the "practical sterilization of the contents of the stomach." In several experiments with these animals "the intestinal tract apart from the cecal pouch, was found to be sterile." Neither bouillon tubes nor agar showed growths, though the controls gave abundant cultures. Other experiments showed that enzymes and toxins are also destroyed or rendered inert by acetozone. Further study demonstrated not only the remarkable germicidal power of acetozone, but also the fact that its aqueous solutions may be given internally, and even injected intravenously, without harm. From these data we infer that this substance ranks among the most powerful germicidal agents, while it exerts no harmful effect upon the human organism, and may, therefore, be employed as a therapeutic agent in the treatment of summer

diarrhea and other infectious enteric diseases with the best effect. There seems to be abundant evidence to warrant the suggestion that acetozone solution should prove most valuable in colonic flushing, as it is entirely free from the danger that attends the use of large quantities of even weak solution of mercuric chloride, and for that reason may be used fearlessly.

S.

The American Electro-Therapeutic Association will hold its next (fourteenth) annual convention at St. Louis, Mo., on Tuesday, Wednesday, Thursday and Friday, September 13th, 14th, 15th and 16th, 1904. The scientific sessions will be held only in the mornings, whereby the members will be afforded an opportunity of visiting the various attractions of the Exposition during the afternoons.

The activity and practical usefulness of this Association in the past is evidenced by the fact that the name of some member has been more or less intimately connected with nearly every electro-therapeutic discovery or development that has transpired during the past twenty years. The Association is the oldest of its kind in existence.

The American Association of Obstetricians and Gynecologists will hold its seventeenth annual meeting at the Hotel Monticello, St. Louis, Tuesday, Wednesday, Thursday, and Friday, September 13, 14, 15, and 16, 1904, under the following administration: *President*, Walter Blackburn Dorsett of St. Louis; *Vice-Presidents*, Aaron B. Miller of Syracuse and William D. Haggard of Nashville; *Secretary*, William Warren Potter of Buffalo; *Treasurer*, Xavier O. Werder of Pittsburg; *Executive Council*, Edwin Ricketts, Walter B. Chase, A. Van der Veer, Lewis S. McMurtry, L. H. Dunning, and Rufus B. Hall. The preliminary program contains the titles of twenty-five papers, including the president's address.

BOOK REVIEWS.

A Text-book of Human Physiology. By ALBERT P. BRUBAKER, A.M., M.D. 8vo. pp. 699. With Colored Plates and 354 Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$4.00 net.

We must confess ourselves as being always interested in works on human physiology, and each new one, when written by a competent man, is interesting to read in view of the fact that so many advances and discoveries are made in this field of medical study. Not only this, but physiology, as a whole, is really the broad foundation stone upon which our knowledge of clinical medicine must rest, and the advances which have been made by physiologists must, in great part, be made the real cause of the marked advances which have characterized the forward strides noted as so characteristic of modern clinicians. For this and many other reasons the student after he has left college should not neglect his study of physiology any more than he should that of anatomy.

The purpose of the author in writing the book before us was to produce a text-book for students and practitioners alike and a critical examination of its contents will easily demonstrate that he was successful in his aim. He has given us a clear, easily understood exposition of the subject and has wisely refrained from overburdening his book with detailed laboratory experiments which, after all, are only interesting to those who are actively engaged in laboratory work and which constitute an entirely different as well as distinct branch of physiology. The author also very judiciously refrains from the discussion of moot points or questions still at issue and throughout makes it a point to supply his readers with facts which have been positively determined. By these means he has succeeded in writing a book which is both reliable and authoritative as well as highly interesting.

We do not propose to give a long review of this work, but rather to call attention to some of its salient points. The histological drawings are quite numerous and very justly so, for in our opinion these are as essential to histology as anatomy is to surgery. The drawings, which are good and the figures clear, are interspersed throughout the text wherever they are of value. The various functions are very clearly set forth and discussed and in a manner which will prove useful to both student and practitioner of medicine. The neuron is disposed of in a short but clear manner, and reproduction is likewise not dwelt upon at length as it more properly belongs to the subject of embryology.

The plates which are given are well drawn and highly explanatory. The print is large and clear, the paper excellent and the binding serviceable. The publishers have produced in this a handsome volume at a remarkably cheap price, and will no doubt be called upon to issue a second edition at an early date.

The Doctor's Recreation Series. *The Doctor's Red Lamp.* A Book of Short Stories concerning the Doctor's Daily Life. Selected by CHARLES WELLS MOULTON. Vol. II. 8vo. pp. 343. [Akron, O.: The Saalfeld Publishing Co. 1904. Price, silk cloth, \$2.50 per volume; half-morocco, \$4.00 per volume. Sold by Subscription Only.

This volume alone is sufficient to establish the superior character of the Doctor's Recreation Series. As a collection of short stories concerning the doctor's daily life and some incidents out of the ordinary it certainly stands without a peer. So far as we know this is the first attempt which has been made to make a collection of short stories by different authors all concerning the daily life of the physician, and no one reading them but will be forced to admit that the compiler has been eminently successful in his work. No attempt has been made to add notes or comments, but a successful one has been attempted to take the stories from the very best material available and by authors of international reputation, such as Conan Doyle, Ian Maclaren, Margaret Oliphant, Henry Sutton, George Edgar Montgomery, Lucy S. Furman, etc. We know that once the reading of this book is commenced it will hold the reader by the very fascination of its stories.

We cannot give a review of each one of the stories and can but mention a few. *The Doctors of Hoyland* by Conan Doyle is a story of the enmity, love and final disappointment of Dr. James Ripley for Dr. Verrinder Smith, a woman doctor. *A Doctor of the Old School* by Ian Maclaren is a very good character study, the scenes being laid in Scotland. *Dr. Barrière* by Margaret Oliphant is a powerful story somewhat tragic in character but full of force and interest. G. M. McCrie is represented by a very interesting story entitled *Dr. Wygram's Son*. It is a tale of more than ordinary interest whose end is a surprise. *A Gentle Maniac* is a one-act comedy by George Edgar Montgomery, and concludes the volume. It is well written and pleasant throughout. Mr. Charles Wells Moulton is certainly to be complimented on his discrimination in selecting the stories.

The illustrations in this volume are four full-page plates which are well executed and from well known paintings. They are: *The Village Doctor* by H. Kretzschmar; *A Spoonful every Hour* by Ph. Fleischer; *Vaccinating the Baby* by Ed.

Hamman; and A Violent Fall by Adolf Echter. The volume like the others of the series is issued in *édition de luxe* style, uncut, gilt top, and deckle edge. Printed upon special paper, the type clear and the binding silk cloth or half-morocco makes each volume one fit to grace the office or library table of any physician. The volumes are good enough and in appearance handsome enough to be placed on the shelves where the best and finest volumes are kept.

The Treatment of Some Acute Visceral Inflammations and Other Papers. By DAVID B. LEES, M.A., M.D. Cantab., F. R. C. P. Lond. 12mo. pp. 300. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.50 net.

It is a well-known fact that many of the most valuable products of the pen of medical authors are but too frequently lost when consigned to the pages of medical journals in comparison with the permanency they gain when placed in book-form. The first part of the book before us consists of three lectures delivered before the Harveian Society of London and are devoted respectively to carditis and pericarditis, pneumonia, empyema, pleurisy, appendicitis, nephritis. The ideas embodied in these lectures are certainly the most valuable, among which may be mentioned the necessity for a more careful, systematic, and repeated determination, by light percussion, of the size of the left ventricle and of the right auricle in all diseases of the heart and lungs. The author also insists upon the importance of relieving a distended right heart by leeches or moderate venesection. He further speaks of the value of the external application of ice in pneumonia, pericarditis, in pleurisy, and in many cases of appendicitis, and in acute nephritis.

In addition to these excellent lectures are given reprints of twelve papers devoted mainly to diseases of the heart and lungs, covering a period from 1880 to 1903. A very good contribution is that on the Icebag as a Therapeutic Agent. Another excellent contribution of more than ordinary interest is that entitled, Is there a Dextrocardiac Respiratory Reflex. A very thorough paper is the Presidential Address on the Heart of the Child, delivered before the Harveian Society. It is only want of space that prevents our reviewing at length all of the papers in this volume. We can truthfully say that no more valuable volume to the physician could be placed upon his book shelves for reference and study.

The publishers have certainly made a handsome, well printed book of this volume.

Radiotherapy and Phototherapy, including Radium and High-Frequency Currents, their Medical and Surgical Applications in Diagnosis and Treatment. For Students and Practitioners. By CHARLES WARRENNE ALLEN, M.D., with the co-operation of MILTON FRANKLIN, M.D., and SAMUEL STERN, M.D. 8vo. pp. 618. Illustrated with 131 Engravings and 27 Plates in Colors and Monochrome. [New York and Philadelphia: Lea Brothers & Co. 1904. Price, \$4.50 net.

The discovery of Roentgen has opened up a vast field for the investigator and has placed within the command of the medical profession therapeutic measures which have accomplished results which had not been thought possible but a few years ago. In fact, radiotherapy, phototherapy, the action of high-frequency currents and all the allied methods of these latest therapeutic measures may be said to be of yesterday and still in their course of evolution. Much literature has already been contributed on the subject which may be said to be still in its period of development. So much progress has been made, however, that a good and useful amount of certainty at present attaches to the methods and are daily being improved upon to such a degree that it will not be very long before it will possess scientific exactness.

We are led to make these remarks by an examination of the book before us whose author has been favorably known to the dermatological world by his numerous and well-written contributions on the subjects of skin diseases and syphilis. In this book the author has endeavored to eliminate all those methods which are doubtful and has based himself chiefly upon his own experience. After an introduction upon radiology, the nature and history of the X-ray and the methods of its production, he proceeds to a consideration of diagnosis both medical and surgical. Part III. is taken up with radiotherapy and is the longest in the volume. In this we are given the treatment of cancers, epithelioma, sarcoma, and skin diseases. Radiotherapy in ophthalmology and otolaryngology are considered in a chapter. Then are taken up general diseases amenable to radiotherapy. We are next treated to a consideration of one of the most important chapters of the work. This is the one on X-ray burn. Other deleterious effects of the X-ray are taken up in the succeeding chapter and the two are such that they should be carefully read and studied by those who have ambitions to engage in the practice of radiotherapy. The medico-legal aspect of the X-ray both as to the admission of skiagraphs as evidence and in relation to suits for damages for injuries resulting from its use is considered in a short chapter.

Part IV. is taken up with phototherapy and Part V. with actinotherapy. Part VI. consists of one chapter on radioactivity

of which but little is comparatively known as yet. In this chapter we are given a general review of radium, polonium, actinium, uranium, thorium, Niewenglowski's rays, the Goodspeed ray, Goldstein or *s*-prime rays, and Blondelot's or *n*-rays, no mention, however being made of the *n*- (or *n*-prime) rays. Many of these, however, are merely in a developmental stage. A very interesting discussion of high-frequency currents, taking up some five chapters, concludes the work.

The illustrations and plates which are given are in the highest degree interesting and instructive. The entire work is certainly one which is peculiarly opportune and destined to warrant the recognition of radiotherapy as a valuable addition to the therapeutic resources of the medical profession. Dr. Allen's work is equally adapted to the needs of the student and of the practitioner, both of whom cannot fail to benefit from this thorough and practical work. We would certainly like to call the attention of our readers to more of the good points of this work but want of space precludes. The best demonstration of its superior worth we can give is to advise all to obtain a copy.

Die Fermente und ihre Wirkungen. Von CARL OPPENHEIMER, Dr. Phil. et Med. Zweite neubearbeitete Auflage. 8vo. pp. 440. [Leipzig: F. C. W. Vogel. 1903. Preis, 12 mk.

FERMENTS AND THEIR ACTION. By Carl Oppenheimer, Phil. D., M.D. Second revised edition. 8vo. pp. 440. [Leipzig: F. C. W. Vogel. 1903. Price, 12 marks.

The present extended monograph in its latest revised form is certainly a most valuable contribution to biology which the author has had the art of making useful as well as intensely interesting. Like all capable German authors, he has made a most thorough study of his subject and he places the results of this study in a most systematic fashion. After a historical introduction, followed by some general considerations devoted to the definition of ferments and their relations to the cells, the chemical nature of ferments, their methods of action, the physiological action including the toxic, the secretion of enzymes, and the effects of ferments upon the processes of life, he enters upon the special consideration of the different forms of ferments which have been determined and whose actions have been studied and established with a certain degree of accuracy.

The first class of ferments considered embraces those which are proteolytic, under which class are included pepsin, trypsin, the proteolytic plant ferments, and the cytolytic ferments, agglutinous and precipitins. Then are taken up in regular order the coagulating ferments, the saccharifying ferments in-

cluding among others the diastases and enzymes. The glucoside forming ferments and other hydrolytic ferments are next considered. The sugar of milk and the alcohol fermentation are next taken up, and the consideration of the latter leads to a consideration of the discussion concerning the chemical and the vital theory. The oxydases both animal and vegetable are also taken up, and the work concludes with a chapter on oxydising fermentations.

This condensation of the contents of the work can only give an inadequate idea of what it really contains. It is a work which is the most thorough on the subject which has yet appeared and it is certainly one which should be translated into the English. It might possibly lead to a revision of much of the inadequate literature on enzymes, diastases, etc., which is so lavishly distributed at the present day. The magnitude of the author's labor may be judged by the fact that the bibliography which he has appended to his work embraces no less than 1,604 separate titles.

Normal Histology. By EDWARD K. DUNHAM, Ph.B., M.D. Third Edition, Revised and Enlarged. 8vo. pp. 334. Illustrated with 260 Engravings. [New York and Philadelphia: Lea Brothers & Co. 1904. Price, \$2.75 net.

The author of this text-book has certainly succeeded in producing a manual of the first order, eminently adapted to the needs of the medical student. His experience as a teacher of this branch has fitted him for this task and he has very well acquitted himself of it. Taking the cell and connective tissue as the basal elements he considers them thoroughly in their correlations, and thus easily leads to a complete consideration of all the special structures of tissues and organs and their adaptation to the functions which they perform. All is made very clear and in comparatively short order without sacrificing thoroughness to a necessarily condensed method of instruction. The figures are numerous and well made as well as demonstrative.

The present, third, edition shows careful revision and some important as well as useful additions have been made. Being a firm believer in laboratory methods, the author has very justly concluded that it would be of advantage to insert what is really a most valuable and practical section in the care and use of the microscope and on histological technique. The more complicated and elaborate methods have not been given in the latter but the principal methods have, and the result is the production of one of the best manuals of histology which have recently appeared.

The publishers have made a handsome volume of this third edition, and it is issued at a price within the reach of every medical student. There is little doubt that a fourth edition will soon be called for by those in need of such a manual.

Physician versus Bacteriologist. By PROF. DR. O. ROSEN-BACH. Authorized Translated from the German by DR. ACHILLES ROSE. 8vo. pp. 462. [New York and London: Funk & Wagnalls Company. 1904. Price, \$1.50 net.

This is a little work which should certainly be read by all those who are enthusiasts in bacteriology, not only to demonstrate to them in a logical and dispassionate way the fallacy of a number of assumptions which they have made, but to show as well the usefulness of bacteria in the way of providing a healthy human organism. We are pleased to note the appearance of a translation of this work by so competent and capable a writer as its author. It is time that a check were put upon what a great many have termed the assertions of bacteriomaniacs. The author is not satisfied with a logical discussion of the questions at issue, but he fortifies his position by the aid of the statistics of those who pose as the champions of the bacterial origin of all diseases.

Whilst not approving all the views, heretofore expressed, *in toto*, he maintains that there has been an attempt made to prove too much. To quote from the book before us (page 341), "Unquestionably nothing is more characteristic of the customary distortion and misconception of facts and their displacement by catchwords than this modern conception of the significance of microbes, identified as they are with the conception of disease, because the coincidence of two phenomena is erroneously placed on a par with causal connection." The author, among other things, does not believe in orotherapy and he opposes the contention that water and milk should be sterilized. This book, on the whole, is one which furnishes much food for thought and should be carefully read and considered by every physician and surgeon.

The publishers have made this a neat, well-printed book, issued at a reasonable price.

An Introduction to Vertebrate Embryology. Based on the Study of the Frog and the Chick. By ALBERT MOORE REESE, Ph.D. (Johns Hopkins). 12mo. pp. 291. With 84 illustrations. [New York and London: G. P. Putnam's Sons. 1904. Price, \$1.40.

The author of the little book before us has written one of the best introductions to the study of embryology that we have had occasion to see for many years. He has very judiciously chosen the frog and the chick as the groundwork of his book and he

has so well written upon these that a study of this manual will certainly render the mastery of larger works on human embryology a comparatively easy task. He very modestly claims no originality and states that the book is a mere compilation. This may be true, but the manner in which the subject is presented and the knowledge of the needs of students are certainly the author's own. He has used the treatise of Marshall as a guide, in large part, but he has also availed himself of the work of the standard authorities on embryology and development.

The author has not followed the method of following one organ through all its stages of development and then another. He has adopted the more natural and logical way of describing each day's development in full, and in that manner follows the entire evolution of his embryo. The book is certainly well written and one which we can recommend to students and teachers, the latter of whom can dilate on the subjects outlined in this excellent text-book.

The Optical Dictionary. An Optical and Ophthalmological Glossary of English Terms, Symbols and Abbreviations, together with the English of some French and German Terms relating to Physical, Physiological and Pathological Optics, Optical and other Instruments of Precision, and Terms descriptive of Color and Photo-Chemistry, to which are added a Number of General and Mathematical Expressions. Edited by CHARLES HYATT WOOLF, F.R.P.S. 12mo. pp. 165. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

It is hardly necessary to speak of the contents of this little book as its title is self-explanatory. The author makes a request in his preface for corrections, and in accordance with this desire we would advise the author to spell the word *color* throughout the work and not alone on the title page, or vice-versa *colour* on the title page as well as in the body of the book. Again, *Augenhohlenwinkel* is defined in two different ways in as many places on page 19. Bull's-eye is defined as a plano-convex lens and no limit of size given; *muscæ volitantes* could also be better defined. These are certainly but minor errors and do not materially deteriorate from the value of the book.

The Gazette Pocket Speller and Definer. English and Medical. Second Edition. Flexible Leather. Pp. 216. [New York: The Gazette Publishing Co. 1904. Price, 50 cents.

This little book will be found particularly valuable by those who are not certain of their English or medical orthography. The definitions are concise but correct and it is a convenient little guide which may be easily carried in the vest-pocket. It

is compactly arranged and its first edition of 15,000 was exhausted in a year; the present one has had many additions without increasing its size.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

The Gazette Pocket Speller and Definer. English and Medical. Second Edition. [New York: The Gazette Publishing Co. 1904. Price, 50 cents.

Die Fermente und ihre Wirkungen. Von Carl Oppenheimer, Dr. Phil. et Med. Zweite neubearbeitete Auflage. 8vo. pp. 440. [Leipzig: F. C. W. Vogel. 1903. Preis, 12 mk.

A Text-Book of Human Physiology. By Albert P. Brubaker, A.M., M.D. 8vo. pp. 699. With Colored Plates and 354 Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$4.00 net.

The Treatment of Some Acute Visceral Inflammations and other papers. By David B. Lees, M.A., M.D. Cantab., F.R.C.P. Lond. 12mo. pp. 300. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.50 net.

Physician versus Bacteriologist. By Prof. Dr. O. Rosenbach. Authorized Translation from the German by Dr. Achilles Rose. 8vo. pp. 462. [New York and London: Funk & Wagnalls Company. 1904. Price, \$1.50 net.

Normal Histology. By Edward K. Dunham, Ph.B., M.D. Third Edition, Revised and Enlarged. 8vo. pp. 334. Illustrated with 260 Engravings. [New York and Philadelphia: Lea Brothers & Co. 1904. Price, \$2.75 net.

An Introduction to Vertebrate Embryology. Based on the Study of the Frog and the Chick. By Albert Moore Reese, Ph.D., (Johns Hopkins). 12mo. pp. 291. With 84 Illustrations, [New York and London: G. P. Putnam's Sons. 1904. Price, \$1.40 net.

The Doctor's Recreation Series. The Doctor's Red Lamp. A Book of Short Stories concerning the Doctor's Daily Life. Selected by Charles Wells Moulton. Vol. II. 8vo. pp. 343. [Akron, O.: The Saalfeld Publishing Co. 1904. Price, silk cloth, \$2.50 per volume; half-morocco, \$4.00 per volume. Sold by Subscription Only.

Radiotherapy and Phototherapy, including Radium and High-Frequency Currents, their Medical and Surgical Applications in Diagnosis and Treatment. For Students and Practitioners. By Charles Warrenne Allen, M.D., with the cooperation of Milton Franklin, M.D., and Samuel Stern, M.D. 8vo. pp. 618. Illustrated with 131 Engravings and 27 Plates in Colors and Monochrome. [New York and Philadelphia: Lea Brothers & Co. 1904. Price, \$4.50 net.

The Optical Dictionary. An Optical and Ophthalmological Glossary of English Terms, Symbols and Abbreviations, together with the English Equivalents of some French and German Terms relating to Physical, Physiological and Pathological Optics, Optical and other Instruments of Precision, and Terms Descriptive of Color and Photo-Chemistry, to which are added a Number of General and Mathematical Expressions. Edited by Charles Hyatt Woolf, F.R.P.S. 12mo. pp. 165. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

The Medical Book News, published by P. Blakiston's Son & Co., of Philadelphia, is to be issued monthly, Richard George Sands Goodwin to act as editor. This journal will have illustrations, a department of editorial comment, and will be changed from a bi-monthly to a monthly, the subscription price being placed at 50 cents a year.

Antikamnia Souvenir.—The Antikamnia Chemical Co. has issued a very pretty souvenir in the shape of a small tray which presents a very pleasing appearance. It is fit for the doctor's desk to hold the ashes of his cigar, or for any lady's dressing table as a pin tray. It is a very neat and pretty bibelot and will doubtless be in great demand by the female members of doctors' families. Those who have not received it may obtain one by addressing a request to that effect to the Antikamnia Chemical Co., of St. Louis.

The Doctor's Leisure Hour Series, a review of the second volume of which appears in the present issue of the JOURNAL, is certainly a unique presentation of the physician's life from a purely human and social point of view. The two volumes which have already appeared, once their true value is known, will gain a popularity which will ever increase, and the publishers will learn that the literary tastes of the medical profession of this country are not wholly confined to the purely technical field and that, as a rule, there are to be found many booklovers among them.

Missouri's Big Book.—Eighty thousand volumes of the most comprehensive book ever issued concerning the Commonwealth of Missouri have just been published by the Missouri World's

Fair Commission and are now ready for judicious free distribution at the Missouri State building by Walter Williams, the well-known editor, under whose direction the work was prepared. "The State of Missouri—An Autobiography," as the book is called, aims to answer concisely, clearly, frankly and interestedly every question that can be asked about our great state. It contains over thirteen hundred notable and excellent photographic scenes in Missouri history, industry, buildings and landscape. Each of the one hundred and fourteen counties is represented in these photographs as well as in the letter press. The heading of the chapter upon each county shows some of its characteristic scenes. From whatever standpoint considered, the work is a monumental one, placing as it does in a permanent, concrete and entertaining form the history, resources and advantages of our great commonwealth.

Clinical Vibration Charts. By M. L. H. Arnold Snow, M.D., are in two numbers. Chart I. The Sympathetic Nerve, shows the Relation of the Ganglia to the vertebræ in colors and the origin and distribution of the great plexus of the sympathetic, Localization of the Functions of the Segments of the Spinal Cord. A Cross Section of a Dorsal Vertebra, showing the Relation of the Sympathetic and Spinal Branches, and a table of Referred Pains. Chart II. The Relation of the Segments of the Spinal Cord and their Nerve Roots to the Vertebræ and a Table of Spinal Stimulation. In the latter table are given according to the best authorities the indications for Spinal Stimulation for the relief of various conditions. These charts are adapted as guides for local stimulation and inhibition in connection with High Potential and other electrical currents as well. The charts are 25x28 inches, on fine heavy paper and printed from costly lithographic plates. Price, \$2.50 net for the two charts.

An Editorial Change.—We cull the following from the editorial page of a recent issue of the *Medical Record*:

It is with deep regret that we have to announce the resignation by Dr. George F. Shrady of the editorship of the *Medical Record* after nearly forty years of continuous service. Dr. Shrady has had editorial control of this journal from its foundation, and it is to his initiative and executive talent that the *Medical Record* owes the position it holds to-day in American medical journalism. The journal was founded thirty-eight years ago, with Dr. Shrady as sole editor, and his name has been on the title page of sixty-five consecutive volumes—a record of continuous editorial management exceeded, we believe, only by that of the Wakleys and *The Lancet*.

The first line of type of the first number of this journal was

set by Dr. Shrady, the first leader was penned by him, and from March 1, 1866, to June 25, 1904, it has been his policy that controlled the editorial pages. During that time the paper has grown from a semi-monthly of twenty-four pages in each issue to a weekly of over 2,000 pages a year.

The change in the editorial management of the *Medical Record* involves no radical change in policy or methods, for the former associate editor, Dr. Thomas L. Stedman, who now becomes editor in chief, assisted Dr. Shrady in the conduct of the journal for some twenty years, and for the past several years a greater part of the editorial work has been under his sole direction. The personnel of the editorial staff remains as before.

We in common with all our contemporaries cannot but regret this step on the part of Dr. Shrady, well earned as his rest may be. We can truly say that he has done his work well and has left a lasting impress upon American medical journalism. *Pax tibi amicus omnium.*

MELANGE.

American Medical Editors' Association.—The thirty-fifth annual meeting of the American Medical Editors' Association, held at Atlantic City in June, 1904, was one of the most successful in its history, C. E. de M. Sajous, president, presiding.

The many papers presented, as well as the numerous applications received for membership, is possibly the best indication of the interest displayed in the Society. Among the new members who joined at this meeting were the following: Dr. Herman Knapp, editor of the "Archives of Ophthalmology," New York; Dr. J. Madison Taylor, "Sajous Encyclopedia," Philadelphia, Pa.; Dr. Joseph McFarland, "Medicine," Philadelphia, Pa.; Dr. H. Longstreet Taylor, "St. Paul Medical Journal," St. Paul, Minn.; William Davis, "St. Paul Medical Journal," St. Paul, Minn.; Surgeon General Walter Wymann, "Sajous Encyclopedia," Washington, D. C.; Louis L. Pilcher, "Annals of Surgery," Brooklyn, N. Y.; H. Enos Tuley, "Louisville Journal of Medicine," Louisville, Ky.; Andrew Mac Phail, "Montreal Medical Journal," Montreal, Can.; A. W. Wright, "Canadian Practitioner and Review," Toronto, Ont., Can.; George Elliott, "Dominion Medical Monthly," Toron-

to, Ont., Can.; E. E. Dorr, "Iowa Medical Journal," Des Moines, Iowa; Frank B. Cross, "Lancet Clinic," Cincinnati, Ohio; F. E. Daniel, "Texas Medical Journal," Austin, Texas; William F. Waugh, "Alkaloidal Clinic," Chicago, Ill.; Wm. J. Robinson, "Critic and Guide," New York; Raymond Wallace, "Southern Medicine and Surgery," Chattanooga, Tenn.; C. Sumner Witherstein, "Sajous Encyclopedia," Philadelphia, Pa.; F. W. Samuel, "American Practitioner and News," Louisville, Ky.; Arthur J. Patlek, "Wisconsin Medical Journal," Milwaukee, Wis.; Langdon B. Edwards, "Virginia Medical Semi-Monthly," Richmond, Va.; Clarence A. Smith, "Northwest Medicine," Seattle, Wash.; Horatio C. Wood, Jr., "Therapeutic Review," Philadelphia, Pa.; Albert E. Stern, "Medical and Surgical Monitor," Indianapolis, Ind.; James U. Barnhill, "Columbus Medical Journal," Columbus, O.; Samuel F. Brothers, "Medico Pharmaceutical Journal," New York; Alfred B. Meacham, "Post Graduate," New York; G. L. Harrington, "Brooklyn Medical Journal," Brooklyn, N. Y.

Among the interesting papers read and thoroughly discussed we would mention: "Proprietary and Patent Medicines," Harold N. Moyer, Chicago, Ill.; "Military Medical Journalism of the Present Day," Major J. Evelyn Pilcher, Carlisle, Pa.; "Sundown Journalism," T. D. Crothers, Hartford Conn.; "Medical Illustrations," H. V. Wurdemann, Milwaukee, Wis.; "Medical Journalism of the Pacific Coast," Winslow Anderson, San Francisco, Cal.; "The Medical Press vs. The Modern Plague," William Porter, St. Louis, Mo.; "Reading Notices," W. C. Abbott, Chicago, Ill.; "Imitation Journalism," H. Waldo Coe.

Following an animated discussion of Dr. Porter's article relative to the use of patent nostrums, the following resolution, endorsing the action of Mr. Bok, editor of the *Ladies' Home Journal*, was favorably acted upon:

Whereas, The public is, and long has been, suffering from the use of nostrums, and from the misuses of medicines; and,

Whereas, The medical profession and press have endeavored by every means in their power to instruct the laity upon the subject; and

Whereas, Some journalists either do not understand the true situation, or find it to their pecuniary gain to favor the use of nostrums and pander to the greed of their manufacturers at the

expense of the health or even the lives of their dupes among the people; and

Whereas, The eminent editor of the *Ladies' Home Journal*, Mr. Edward Bok, in an able and vigorous editorial on page eighteen of the May number of that journal, laid the truth of the matter before his readers, thus aiding in the work of warning and educating and conserving the health and welfare of the public; be it

Resolved, That the American Medical Editors' Association approves and commends Mr. Bok for the intelligent, honest, fearless and well-grounded position he has taken, which has been thoroughly appreciated by us and by the medical profession generally.

Resolved, That copy of these resolutions be spread upon the minutes of this meeting, be transmitted to Mr. Bok, and be published in the medical journals throughout the country.

Dr. Porter presented the following resolution bearing upon the death of Dr. I. N. Love, an ex-president of the American Medical Editors' Association:

Through the joys of to-day come refrains in minor key. We welcome our friends again, but some have dropped out forever. One day eager in all that makes the activities of life—the next cold and silent on the bosom of the dark, mysterious river. Dr. I. N. Love was no ordinary man. Endowed as few are, he cultivated the art of showing to others the natural buoyance of his nature and keeping well within himself the burden and shadows that few knew of and the many never dreamed of. No one was better known in the medical societies of the country and especially in this Association. Quick, witty, generous, he made friends at every turn, and if to-day he made an enemy, to-morrow he was likely to kill him with kindness.

Of his work as a physician and an editor, you who were his friends through the decades, need not be told. As a physician he was sympathetic and intelligent beyond the possibilities of most men. The devotion of his patients was a natural sequence following the sunshine of his presence in the sick room. As an editor he was original and personal, but his personalities were more likely to be eulogistic than censorious. He called his Journal "a reflex of the medical profession," but it was more notably a reflex of his own life.

Realizing the difficulty of expressing a just appreciation of the life of one so brilliant so fascinating and energetic, yet in token of the sense of loss sustained by the Association, be it

Resolved, That the members of the American Medical Editors' Association, while mourning the decease of Dr. I. N. Love in the zenith of his manhood and opportunities for usefulness, remember and cherish the recollection of all in his most attractive individuality that made his record so large a part of the history of this Association.

Resolved, that a large page of our record books be set apart for the resolutions and that a copy be sent with our truest sympathy to the members of his family.

WM. PORTER,
C. F. TAYLOR.

A committee was appointed by the Chair, composed of C. F. Taylor, chairman, Dr. Hogehead, of San Francisco, Cal., and Dr. Pilcher, of Carlisle, Pa., and the Secretary, member ex-officio, to draft a new Constitution and By-Laws to be presented at the next meeting.

The following officers for the coming year were elected: President, Harold N. Moyer, Chicago, Ill.; first vice-president, C. Evelyn Pilcher, Carlisle, Pa.; second vice-president, O. F. Ball, St. Louis, Mo.; secretary and treasurer, J. MacDonald, Jr., New York. The Executive Committee: C. E. de M. Sajous, Chairman; John Punton, W. A. Young, W. C. Abbott, H. M. Simmons, C. F. Taylor and Chas. Wood Fassett.

This Association now enjoys a membership of over 100 active medical editors, and those medical journalists not now associated are invited to present their applications for membership to the Secretary. Dr. J. MacDonald, Jr., 100 William street, New York City, N. Y.

The Benefit of Fasting in Typhoid Fever.—Dr. R. M. Harbin (*Jour. Am. Med. Ass'n*, July 11th, 1903) reports ninety cases of typhoid fever with four deaths, from which statistics he concludes as follows:

1. Fasting and a restricted diet are indicated because of pathologic conditions.
2. Emaciation occurs independently of the amount of food taken.
3. All severe cases should be subjected to fasting for twen-

ty-four to forty-eight hours to relieve the active symptoms, which exhaust the patient more rapidly than the lack of food.

4. After a fast a restricted diet of broths, diluted milk, etc., should be prescribed in definite quantities.

5. Gelatin prevents too rapid emaciation in certain cases and renders hemorrhage less liable.

6. The cold bath or modified cold bath is more effective during a fast.

7. Peristalsis favors the absorption of toxins, and cathartics should be used only to remove undigested food.

8. The presence of intestinal ulcers should be assumed to exist in every case, and the proper treatment is rest, which is better attained by fasting and a restricted diet, thus preventing hemorrhage and perforation.

9. The presence of diarrhea and vomiting indicates the adoption of the fasting treatment.

10. Fasting and a restricted diet shorten the course of the disease, and many cases run an abortive course after the amphibolic period.

11. Many of the vaunted cures from specific drugs are dietetic in fact.

12. Recrudescences are nearly always due to dietetic errors.

13. In the above report, forty-five consecutive cases occurred without a death. Of eighty-seven whites, two, or 2.2 per cent., died. Of colored, two died, and the low mortality of 4.4 per cent. of all cases was ascribed to the above treatment.

Apropos of fasting in continued fevers, Coca, in the form of Vin Mariani, which may be given well diluted with cool water, has been advocated with pronounced success. It not only allay the abnormal craving for food, but relieves the intense thirst which is so distressing to both patient and attendants. —*The Coca Leaf*, December, 1903.

Indians Pray for Rain.—Their mystic ceremonials among the Cliff Dwellers at the World's Fair at St. Louis, U. S. A. The less civilized a people, the more material are the wants which they implore their deities to supply. Rain, rain, rain on the parched fields of Mokiland in the far-off Painted Desert of the Colorado in Arizona is, at this time of the year, the supplication that is wafted heavenwards by the Moki and Zuni priest

descendents of the ancient, now totally extinct Cliff Dwellers. The Snake Dance, really the Rain Dance of the miracle-working Zuni priests and medicine men, has become famous throughout the Mesa-Land of the Unknown West. This Snake Dance, in all its native wizardry, is being repeated several times daily, Sundays alone excepted, at the Cliff Dwellers Concession at the World's only greatest Fair in St. Louis. Twenty lithe-limbed medicine men, twenty forbiddingly caparisoned priests, an entire Indian orchestra of tom-tom beaters and a full choir of Zuni incantation chanters. No such scenic, vocal or instrumental investiture, strictly native and aboriginal, has ever before been seen at any World's Fair or public exhibition of any kind. The Cliff Dwellers Concession was the first organization at St. Louis to grasp the possibilities of the theatrical as well as the educational side of such a display, and their Theatre Moki in the midst of their handsome and complete exhibit is daily and nightly thronged by thousands of interested and diverted spectators, including all sorts and conditions of men. The strange part of the attendance is found in the presence at all times of Indians from the United States Government and other exhibits, drawn thither by the fame and wonderful Shungopavi, chief of the Moki medicine men, but greater than that, a necromancer, miracle-worker and sleight-of-hand performer absolutely the best among the North American Indians yet brought within the confines of civilization. The ordinary mountebank stands abashed at the skill and dexterity of this son of the Mesa whose keen eyes have a fascination all their own. All the passes, palming, and other exhibitions of wizardry of which the theatres and the books are full, are known to this strange man who invents as he goes along the neatest little tricks in mystification and duplicates instantly all those which the spectators, having seen them elsewhere, ask him to repeat. He does all this amid strictly Zuni environment and without the slightest use of apparatus, covered tables, assistants or paraphernalia of any kind. But the Cliff Dwellers exhibit has other great features. It is first and foremost an ethnological exhibit. It reveals in all its parts the intention of its projectors to afford World's Fair visitors the fullest opportunity to study the manners, customs and tribal relations of the earth's strangest people in what is to-day the United States. These

Zunis, Mokis and Pueblos, direct descendants of the famous, now extinct Cliff Dwellers of the Unknown West, have since time immemorial been a peaceful people. Slaughter of or by the whites is not in their records. They have lived an isolated existence, cultivating the arts of peace rather than war, and they are to-day the best exponents of the fine old adage: "Peace hath her victories no less renowned than war." Their ways are gentle and the elements so mixed in them that nature might rise up and say to all the world: These are men. Naturally with a people though aboriginal, so constituted, the care of women and children is of first importance. It is amusing to watch the Zuni children, only yesterday on the Mesa and to-day in the metropolis of the Mississippi Valley, disport themselves with all the ease and unconcern of their native state. The mothers have infinite patience with their little ones, the youngsters are strong, supple, agile and sweet-voiced. Fear is not in them. They trust their elders and are happy.

International Electrical Congress of St. Louis.—An International Electrical Congress will be held in St. Louis during the week September 12 to 17. The congress will be divided into two parts, namely: (1) A chamber of government delegates appointed by the various governments of the world, invitations to which were issued at the beginning of the year from the United States Government. The transactions of the Chamber of Delegates will relate to matters affecting international questions of electrical units, standards, and the like. (2) The congress at large, divided into eight sections, one of which is for electrotherapeutics. The chairman of this section is Dr. W. J. Morton, New York City, and the secretary is Mr. W. J. Jenks, of New York City. Three hundred and forty-three official invitations were issued some months ago to well-known workers in electricity, inviting papers for the congress. One hundred and sixty-eight of these invitations were issued to persons residing in countries outside of North America. As a result of these invitations, 105 American and 59 foreign specially prepared papers are promised to the congress. Of these, 5 foreign and 15 American papers are in the section on electrotherapeutics.

Announcement.—The next meeting of the Pan-American Congress will be held in Panama the latter part of December.

The Panama-American Congress meets every three years. It was started by Dr. William Pepper, of Philadelphia; Dr. A. L. Reed, of Cincinnati; Dr. Albert Van der Veer, of Albany, and Dr. H. L. E. Johnson, of Washington.

The first meeting was held in Washington, in September, 1893, the second in Mexico in 1896. The third was to have been held in Venezuela in 1899, but was given up on account of the war in that country. The place of meeting was changed to Cuba, but had to be postponed until 1901 on account of the fever there.

These meetings have always been well attended, and it is thought that Panama will be an interesting place for the convention.

Further particulars will be sent out from time to time to THE MEDICAL AND SURGICAL JOURNAL, together with notifications of the different officers appointed to represent this and other countries. Very respectfully, Ramon Guiteras, Secretary of the International Executive Committee.

The New York School of Clinical Medicine announces the following changes in faculty: General Medicine:—Professors Wm. Brewster Clark and Henry Lawrence Schively; Associate Professors, Thos. M. Acken and Ewd. L. Kellogg. General Surgery:—Professor Simon J. Walsh and Associate Professor J. Cameron Anderson. Gynecology:—Professors Augustin H. Goelet and A. Ernest Gallant. Pediatrics:—Professors Dillon Brown and Henry Comstock Hazen. Nervous and Mental Diseases:—Professors J. Arthur Booth and Emmet C. Dent. Gastro-Intestinal Diseases:—Professor Robert Coleman Kemp. Ophthalmology and Otology:—Professors John L. Adams and Geo. Ash Taylor. Dermatology:—Professor Robert J. Devlin. Laryngology and Rhinology:—Professor Max J. Schwerd. Orthopedic Surgery:—Professor Homer Gibney. Hydrotherapeutics:—Professor Alfred W. Gardiner. Genito-Urinary Diseases:—Professors Wm. K. Otis, Walter Brooks Brouner and John von Glahn. Pathology:—Professor E. E. Smith. The facilities of the School have been materially enlarged.—John L. Adams, M. D., Sec'y.

Missouri University at the State Fair.—This year the University of Missouri will have the most complete and comprehensive educational exhibit ever shown at the Missouri State Fair. An attempt will be made to make the exhibit educational as well as attractive. Several striking things will be presented. A collection of diseased fruit and vegetables will be shown, and an attendant will describe these diseases and point out the best methods of preventing them. Eighty kinds of wheat grown as nearly as possible on the same kinds of soil will give an idea of the productivity of the different varieties. A daily demonstration of the best means of separating and testing milk and of making cheese and butter will be given. A series of tubes will show a method of testing soils that can be used by any intelligent farmer.

Histological Character and Diagnosis of Malignant Neoplasms of the Digestive Organs and Peritoneum.—John G. Hemmeter declares that it is a characteristic of malignant tumors that cells of other types than the original are never involved in the growth. In the diagnosis, first the anatomical properties should be considered; second, the topographical; third, the distribution of the various tissue types in the tumor; and fourth, the properties and peculiarities of the cells. The most reliable criterion of malignancy is the metastases. In examining sections of neoplasms of the gastro-intestinal tract, the muscularis mucosæ is, as a rule, an important landmark. Any proliferation of epithelial cells around a gastric ulcer, for instance, which has extended downward along the peptic ducts and broken through the "muscularis mucosæ," the writer is in the habit of considering malignant. The most difficult histological diagnosis of stomach tumors has been encountered in deciding between chronic hyperplastic gastritis and scirrhus. The proliferation of the great majority of cancers in the digestive tract starts from the surface, cylindrical, or columnar epithelium, or from the gland cell. All observations of mitosis have reliable value only when made on faultless material. All malignant tumors show an especial tendency toward disintegration, and especially cancers, which are situated on the surface, almost always forms ulcers. Although the diagnosis of the two forms of tumors, cancers and sarcomas, can be

formed with tolerable certainty, the malignancy of complex tumors is exceedingly uncertain, and only to be diagnosed from the anatomical picture when its malignancy has already become manifest, that is, when real metastases have been developed. It is well known that the human gastric or peptic ulcer may become transformed into an adenocarcinoma apparently spontaneously. A structural characteristic of the adenocarcinoma which has developed on the basis of a gastric ulcer consists in an oblique ascension of the fibers of the true muscular layer, and a descension of the fibers of the muscularis mucosæ, the fibers of both muscular layers converging toward and fusing into each other in front of the edge of the ulcer, which is here composed mainly of connective tissue. A section made perpendicular to the surface of the stomach, and through the entire bed of the ulcer, almost invariably exhibits the general outline of a fish-hook. The writer believes that we are justified in concluding that any gastric adenocarcinoma presenting these striking features, has been developed on the basis of a pre-existing gastric ulcer.—*Medical Record*.

Primary Carcinoma of the Vermiform Appendix.—It would seem as though we had still much to learn regarding the pathology of the cecal appendage. Dr. A. W. Elting, in the current number of the *Annals of Surgery*, furnishes a careful study of carcinomatous growth of the vermiform appendix, and arrives at the following conclusions: Primary cancer of the appendix is not of such rare occurrence as has been hitherto supposed. Every appendix removed at operation or autopsy, if it presents any evidence whatever of disease, should be examined microscopically. There is a relationship between primary carcinoma of the appendix and chronic appendicitis. Primary carcinoma of the appendix is said to show a tendency to develop at a comparatively early period of life, but does not show marked tendency to extend or give rise to metastasis. The symptoms are usually those of a chronic appendicitis, and while we learn that the diagnosis is in the great majority of cases impossible, "treatment should always be operative."—*Med. Press & Circular*.

MISCELLANEOUS NOTES.

Sanmetto in Catarrh of the Genito-Urinary Organs in the Female.—Recently I had occasion to try Sanmetto in catarrh of the genito-urinary organs in the female. The patient was a young married woman, thirty years of age, the mother of five children. She complained of scant but frequent urination. I made an examination and found irritable bladder with acid urine and offensive sedimentary deposit. I gave a prescription of copaiba, potash, lavender and lithiated hydrangea, which did some good, but did not give me satisfaction. When Sanmetto occurred to me I added a whole bottle of it to my prescription; then my patient began to make rapid improvement, and within a week was well. Her husband told me afterwards that the medicine had infused new life into her, and that her erotic powers had greatly increased, and that for which she always formerly had an aversion was now made a pleasure to her. I think there is no better medicine made where the same is indicated. MAX SMITH, M.D.

Pages Mills, S. C.

Treatment of Chronic Ulcer of the Leg of Long Standing.—By Horatio W. A. Cowan, M.B., and C. M. Aberd. At the beginning of the present year I was called to a woman, aged 54 years, who had a chronic sloughing ulcer for 22 years situated on the outside of the left leg, some ten inches long and three inches wide, with indurated edges and some thrombosis of the veins of the inside of the knee. Having first cleansed the ulcer with charcoal poultices for two days, I applied wet butter cloth and then spread Antiphlogistine over it after which cotton wool and a bandage were put on. This was done every day by the patient's friends for four months. The ulcer is now quite healed over and the induration is all gone. She is able to resume her ordinary housework. I publish this case in the hope that it might be useful to others, as Unna's paste and all sorts of methods had been previously tried. I may say that I have no personal interest in Antiphlogistine.—From *The Lancet*, London, Eng., July 2, 1904.

Dermapurine.—Valeene, Ind., Nov. 26, 1900, Derma Remedy Co., St. Louis, Mo. Gentlemen:—I used the sample bottle of Dermapurine you sent me some time ago in a severe case of eczema of the scrotum. It was one of long standing, and in which all other known remedies had almost entirely failed. The patient was troubled with pruritus, and upon the first application it entirely subsided. The patient made a complete recovery with one sample bottle of your most excellent remedy. Its merits cannot be too highly praised. It is a remedy from which most gratifying results may be expected. I take great pleasure in recommending this excellent preparation to the medical profession. I remain, Yours very respectfully, L. F. Glenn, M.D.

Mansfield, La., Jan. 1901, Derma Remedy Co., St. Louis, Mo. Gentlemen:—Your Liquid Dermapurine was received and used with satisfaction. I am, very truly, E. I. Persinger, M.D.

Months ago you kindly sent me trial supply of your remedies, with which I was much pleased. They entirely removed a patch of eczema on the back of my neck, after other remedies failed. Dr. D. Bartley, Crawfordsville, Ind.

Pepto-Mangan (Gude) in Eczema.—Atlanta, Ga., December 22, 1903, Messrs. M. J. Breitenbach Co., 53 Warren Street, New York City. Dear Sirs: A feeling of gratitude prompts me to acquaint you with the wonderful success with which the use of your preparation, Pepto-Mangan (Gude), was accompanied in several instances within our direct observation. A nine year old inmate of this institution had for some years been an epileptic. After all the ordinary remedies had been exhausted, we put him, on the recommendation of Dr. S. G. C. Pinckney, on Pepto-Mangan. In the course of a few months his attacks became less frequent, until they entirely disappeared, whereupon the medicine was discontinued. It was not long, however, before he was again seized with a spasm, which recurred in constantly lessening intervals until he had relapsed into his old condition. Once more we put him on your preparation, continuing it this time for a whole year, long before the expiration of which the attacks had again gradually subsided. Since the second discontinuation more than a year has elapsed, and still the lad is hale and hearty, and entirely without a symptom of his malady.

Beyond a question of doubt, a radical cure was also effected in a number of cases of eczema of the scalp, which had spread in an alarming manner in our "home," and which has baffled the skill of the most experienced specialists. For six long years had we been battling against this scourge in vain, and we probably would still be struggling against it had not the use of Pepto-Mangan (Gude) been resorted to. The circumstances accompanying the above instances conspire to furnish not merely a conviction, but a proof absolute of the efficacy of your preparation. The latter is rather expensive, and we are as poor as an orphanage generally is, yet we feel it a sacred duty to continue the use of Pepto-Mangan whenever indicated. Believe me, gentlemen, most respectfully yours, Hebrew Orphans' Home, J. A. Sonn, Supt.

Aletris Cordial an Emmenagogue.—When the menses are suppressed from exposure or from colds, wet feet, the result of emotional excitement, or febrile conditions, if not complicated with organic change, but by a mere passive congestion, aletris cordial (Rio) is a very reliable remedy. It is an emmenagogue, not abortifacient.

A Scotch Doctor's Opinion.—*The Quarterly Journal of Inebriety*, so well and favorably known through the instrumentality of its brilliant and philanthropic editor, T. D. Crothers, A.M., M.D., quotes the following statement in reference to pain-relieving remedies, from one of Great Britain's noted medical men, Dr. John Stewart Norvell, Resident Surgeon, Royal Infirmary, Edinburgh: "Antikamnia Tablets are a remedy for almost every kind of pain, particularly for headaches, neuralgias and neuroses due to irregularities of menstruation. They act with wonderful promptness; the dosage is small, two tablets. The undesirable after-effects so commonly attending the use of other coal-tar analgesics are entirely absent and they can therefore be safely put into the hands of patients, for use without the personal supervision of the physician."

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ORIGINAL COMMUNICATIONS.

SOME EXPERIENCE WITH VIOFORM.

BY A. H. OHMANN-DUMESNIL, ST. LOUIS.

Vioform is a chemical containing iodine, which is an antiseptic dusting powder which has been proposed as a substitute for iodoform and possessed of advantages over this preparation which will be enumerated further on. Chemically it is iodo-chloroxy-chinolin, its formula being $C_9 H_3 NO HICl$. It presents the appearance of a greenish-yellow powder, insoluble, non-toxic, non-irritant and six times as light as iodoform. It is practically odorless and it possesses the following advantages :

1. It has no disagreeable odor.
2. It can be sterilized without decomposition or loss of valuable properties.
3. It is anti-tubercular to at least the same degree as iodoform.
4. It is non-irritant and non-toxic, owing, probably, to its insolubility and stability.
5. It prevents decomposition in wound secretions to a much higher degree than iodoform, and drains and tampons may be left in situ for a considerable length of time.
6. It is six times bulkier than iodoform.

Whilst this remedy is excellent in tuberculous processes it is not to be injected in closed tuberculous cavities, such as joints, as clinical experience has shown that in such cases where free drainage does not exist the formation of abscess is very apt to occur. In other instances of surgical troubles, whether due to operation or to disease, it has proven of real value.

As was demonstrated in Professor Schedé's clinic at Bonn, as reported by Dr. V. Schmieden (*Deutsche Zeitschrift fuer Chirurgie*, Heft 5-6, Bd. 61, Nov., 1901), vioform was particularly valuable when used as a dusting powder after operations in which no bandage was used, such as hare-lip, etc. Vioform is claimed to be a bactericide, but it is so only in the sense in which iodoform is. It has many applications in surgery, but mainly in minor operations. My experience with it has been a very gratifying one, having used it both in powder form and in an ointment. The following are the condensed histories of a few cases in which it was employed.

Case 1.—James C., 26 years of age, unmarried, a clerk, came to see me for the treatment of a chancroid. He was inoculated one week before coming to see me and the lesion was moderately deep and well-defined. The patient stated that it was very painful and caused a certain amount of loss of sleep. He was very anxious concerning the consequences of this trouble, although he had no idea of the possibility of a bubo manifesting itself. There was but little suppuration present in the ulcer, and the only cause of disquietude on the patient was the fear that it might be syphilitic. These fears being allayed he very promptly took up the treatment ordered and was well in a short time. He was ordered to keep the ulcer clean and to apply powdered vioform three times daily. This he did for four days when I saw him again. The chancroid looked much improved and he was advised to apply the vioform in powdered form but twice daily. This was continued until ten days after the beginning of the treatment, when he was discharged cured. Improvement set in directly after the inception of the treatment, and my opinion of the preparation was certainly very good.

Case 2.—This was in a female, aged 22, a puella publica, who applied for the treatment of a chancroid at the posterior commissure of the vulva. The patient stated that it was very painful and interfered with locomotion and she could not sit with comfort. The lesion itself was of butterfly shape, there having been auto-inoculation of the surface opposed to the ulcer which first appeared. The patient was rather stout and inclined to perspire freely so that the use of a powder was en-

tirely out of the question. The following was accordingly ordered :

R Vioform, 3j
Ung-aquæ rosæ, 3j
M.

Sig. Apply twice a day.

Of course the parts were to be thoroughly cleansed before each application of ointment. For this purpose she was told to use pretty liberally peroxide of hydrogen (Marchand), dry the parts thoroughly and then apply the ointment. The patient made an uneventful recovery in two weeks. The cure was retarded by the fact that the woman plied her vocation before the full termination of her case, although she had been warned not to do so. However, the slight delay did not prevent a complete ultimate recovery.

Case 3.—This patient was a married man of 45, by occupation a printer, who indulged in excessive drinking. He was rather heavy in weight, but bloated in appearance. He acquired his trouble during a drunken frolic with some companions, during which he had connection with a woman in a house of ill-repute. Some three days later he observed a painful sore of the penis and this caused him to seek medical relief. Upon examination I found a circular chancroid which involved the whole mucous surface of the prepuce which was rather long. Suppuration was well marked and pain was also of an excruciating character. Phimosis was rather pronounced, but I insisted on his drawing the foreskin back completely so as to be able to thoroughly cleanse the implicated parts. The glans was inflamed through the action of the confined pus which was rather profuse in quantity. In this case the application ordered consisted first of thoroughly cleansing with soap and water and then applying an ointment containing two drachms of the remedy to one ounce of cold cream. After this the anointed surface and the glans were to be liberally sprinkled with vioform powder. This dressing was ordered to be repeated twice a day. The patient was somewhat negligent in carrying out directions and got drunk once or twice during the course of treatment, thus retarding his recovery which finally took place one month after beginning the treatment.

Case 4.—This was a boy of 16, who worked in a machine shop, and had three crushed and lacerated fingers, the result of an accident, his left hand having been caught in the cogs of a cog wheel. The bleeding was rather profuse but no arteries were torn or cut. He came rushing to my office with the hand wrapped up in a dirty rag dripping with blood. The hand was washed and then dried and the machine grease and other dirt was removed as well as the circumstances permitted. The torn and lacerated skin was replaced in position and held there by a few sutures. Another washing placed the injured member in a condition where it could be dressed. This was done by liberally powdering the wounded parts with vioform and then wrapping over all a piece of sterilized gauze over which vioform had been sprinkled. The dressing of gauze was removed every two days and fresh vioform applied. On the fourth day the sutures were removed and no pus showed itself. In three weeks the case was discharged completely healed *per primam*. I saw the case once more about ten days after this and there were no evidences of pus or other bad effects.

It is certainly unnecessary to make any comments upon the cases hastily sketched above. The results were excellent and the treatment simple. One advantage observed in connection with the use of vioform is the absence of all disagreeable odor either of the remedy or from the tissues which are treated. It seems to possess deodorizing properties of a comparatively marked character and this is one quality which should recommend its use in foul, ill-conditioned lesions. When the dressings are removed they do not give out the strong, penetrating, disagreeable odor which is so frequently observed in connection with other antiseptics. Some other advantages connected with vioform are that it does not produce pain, or a very slight burning sensation which is transitory. In the next place there need not be so much care and caution exercised in its use from the fear of producing symptoms of poisoning, for it is not toxic. We have written the foregoing for the reason that this agent is comparatively unknown and we have found it of particular value in the treatment of chancroids. It is not the intention to laud it as a specific, but it certainly is as nearly a rapid curative agent as any we have had occasion to use and it possesses none of their disagreeable features in the way of a bad odor, irritating effects or slowness of action.

PEPTO-MANGAN; ITS THERAPEUTIC ACTION.*

BY OTTO ROEN, M.D., VIENNA, AUSTRIA.

As early as 1849, Hannon demonstrated the presence of manganese in the blood, and in the same year Petrequin showed that iron and manganese decrease to the same degree in the blood of chlorotic persons, and therefore must be replaced in an equal measure. In 1857 Menke called attention to the pharmacodynamic significance of manganese in the mineral waters of Pyrmont, while Rühle ascribed chlorosis to an impoverishment of the blood in manganese or iron or both conjointly.

The most recent researches have not only confirmed these statements, but have demonstrated that manganese acts more powerfully upon the oxygen of the blood than iron, and hence promotes assimilation more energetically than the latter. That notwithstanding these initial experiments, the therapeutic use of manganese has fallen into oblivion, is attributable to the fact that hitherto it was not found possible to combine both these hematogenic elements in a form in which they would be easily absorbed.

If in the search for a preparation fulfilling these requirements we review the inorganic compounds thus far known, we learn both on the ground of theoretic considerations and practical experience, that neither oxides nor soluble or insoluble oxids, neither acid nor alkaline combinations of iron and manganese, respond to the moderate demands.

Even the organic preparations heretofore produced—the iron albuminates and iron peptonates—suffer from similar disadvantages as the inorganic. The albuminate of iron is held in solution by a comparatively large amount of caustic soda, which neutralizes the gastric juice, while a decomposition takes place with the formation of the irritant chloride of iron. On the other hand, the peptonates of iron are rendered soluble by the addition of a relatively large quantity of mineral acids, and consequently are precipitated by the alkaline intestinal secretions and rendered more difficult of assimilation.

All the chalybeates hitherto in use therefore do not satisfy the chief requirement demanded of them, viz.: a neutral reaction;

* Translated from *Medicisch-Chirurgische Central-Blatt*, No. 38, 1903.

moreover, they lack one important factor against chlorosis, anemia, and allied conditions—manganese.

In the pepto-mangan of Gude it has been found possible to unite all the advantages and eliminate all the disadvantages referred to above. It contains iron and manganese in a neutral combination with peptone. As will be seen from the literature published, this form, according to clinical experiments extending over ten years, has proved to be the only one in which manganese plays a prominent part as an oxygen carrier in the function of the blood.

Dr. Heitzmann, of Vienna,† recommends during medication with pepto-mangan, a diet consisting of milk, the red kinds of meat, especially ham, poultry and soft boiled eggs, and other easily digestible foods. He has successfully employed the preparation in a number of cases, both in chlorotics and in girls and women who had become anemic in consequence of repeated losses of blood (menorrhagia, metrorrhagia), or after recovery from inflammatory processes of the pelvic organs (peri- and parametritis), as well as after long existing catarrhal discharges from the genital organs (leucorrhea).

In most every instance he was able to observe a rapid increase of the appetite and an improvement in the bodily nutrition, a healthy color of the face, a gain in weight, and, on the other hand, a disappearance of the weakness and digestive disturbances. Heitzmann mentions with particular praise that pepto-mangan, as compared with similarly acting preparations, was gladly taken by the patient without any deleterious after effect, even during prolonged use. The fact that it is so well borne depends upon the pleasant appearance of the clear, dark, red fluid, and its agreeable non-metallic and non-astringent taste. It does not act injuriously upon the digestive organs like other chalybeates, but, on the contrary, increases the appetite.

Dr. E. Hoenigschmied, of Weistrach, reports several very instructive histories of cases, of which we will reproduce one here in abridged form. Rosa H., 26 years old, has suffered since a number of years with chlorosis. The mucous membranes were pale; the pulse 140, small and thread like; the appetite was impaired; the stools irregular. The patient complained of lassitude, vertigo, tinnitus, dyspnea, and palpitation of the

†Heitzmann: The Uses and Action of Pepto-Mangan Gude (Allg. Wr. Med. Ztg.)

heart. As various other chalybeates were not well tolerated, because they produced a feeling of pressure in the stomach and nausea, Honigschmied ordered pepto-mangan, in doses of one teaspoonful twice daily, in some milk, besides aqua laurocerasi, in soda or raspberry juice. She was nourished exclusively on milk, with barley water and clear meat broth. After a few days the malaise and nausea subsided, so that the aqua laurocerasi could be discontinued, a desire for food manifested itself, and the patient was able to take besides milk some beef, a soft egg with a roll, and the like. The dose of pepto-mangan could now be increased to three teaspoonfuls, and later to three tablespoonfuls, daily. At the end of six weeks her condition had so much improved that she was able to take a walk of three-quarters of an hour's duration without any weariness. The pulse had become quite vigorous, being 80 to the minute. The mucous membranes had a healthy color.

The other cases corresponded to that just mentioned in regard to the action of the preparation, which, according to Dr. Hoenigschmied, is superior to any other ferruginous remedy.

Dr. Ripperger† justly excludes as inconclusive evidence of the efficacy or inefficacy of a ferruginous preparation those cases of improvement in the quality of the blood from its use, in which the anemia follows profuse hemorrhages or extensive operations, or those cases of anemia due to gastritis in which both these conditions receive treatment, since it is impossible to determine how much is to be attributed to the action of the chalybeate and how much to the natural regeneration power of the organism. Furthermore, those experiments are indecisive which are made on patients who have been only a short time in a hospital, because persons of the poorer class here obtain a more substantial diet, those of the wealthy class a more wholesome one, and this in itself is calculated to improve the quality of the blood. To permit of an objective conclusion only those cases of pure essential chlorosis are left which are treated in ambulatory practice, since their mode of life, condition of nutrition and work remain practically unchanged before and during the use of the iron preparation which is being tested. Whatever improve-

† Dr. A. Ripperger (New York Medic. Monatschr. No. 12, 1898): A Few Remarks on the Ferruginous Treatment of Chlorosis, with Especial Reference to Pepto-Mangan (Gude).

ment is then obtained in a case of chlorosis can thus be ascribed in great part to the medicament employed.

In accordance with these very rigorous requirements, Dr. Ripperger made his experiments with pepto-mangan in the German Dispensary of New York. In these carefully selected cases the preparation was employed to the exclusion of any other treatment, and in 92 per cent. a considerable increase of the percentage of hemoglobin was obtained. In a few other cases the result was negative. In all of the successful cases the subjective condition was materially improved. Deleterious effects upon the stomach and intestinal canal were not complained of by any patient, and it was, as a rule, gladly taken.

This author therefore designates pepto-mangan as a very useful and easily assimilable ferruginous preparation, which does not tax the digestive organs, and which deserves general consideration and use in the treatment of chlorosis.

A very extensive test of pepto-mangan has been undertaken by Dr. Pohl, of Vienna.** In conducting these experiments he made determinations, of the bodily weight, the condition of blood pressure, the proportion of hemoglobin, and the number of blood corpuscles.

As regards the bodily weight, a reduction was observed in sluggish, obese, chlorotic patients, and an increase in lean persons, of course in connection with an appropriate regulation of the diet. An improvement of the general condition always accompanied this.

There was constantly a change in the condition of blood pressure in the form of an increase of 60 to 80 mm. The variations of blood pressure in changes of posture disappeared; the pulse frequency fell considerably, and in connection therewith the unpleasant palpitation of the heart subsided.

There was frequently a rapid increase of the percentage of hemoglobin and the number of blood corpuscles. As evidence that pepto-mangan stimulates the blood-generating organs to greater activity, Pohl was able to note in numerous instances the appearance of so-called immature forms of blood corpuscles. This assumption is supported by the fact that in disease of the blood-forming organs, as for example in leukemic processes, an excellent curative effect was derived from the administration of

**Pohl: On Pepto-Mangan (Gude). (Aerztlicher Central Anzeiger).

pepto-mangan, so that even in severe cases the process was arrested and the glandular swellings were decreased.

In hysteria, neurasthenia, and malarial cachexia, the preparation proved of conspicuous service.

Pohl therefore predicts for pepto-mangan a permanent place in the pharmacopeia.

Dr. Frieser, of Vienna,†† has presented the most recent report on this preparation. He found that excellent results were obtained not only in primary anemia and chlorosis but in all those diseases which are accompanied or followed by anemic conditions. Its action in scrofula and rickets was usually very satisfactory, and no less favorable in the initial stages of tuberculosis, where symptoms of anemia are frequently noticeable. This also applies to conditions of weakness and to convalescence from acute febrile exhausting diseases (pneumonia and typhoid), as well as to debilitating chronic affections which are frequently attended with anemia, such as tuberculosis, malaria, protracted gastric catarrhs, and other ailments in which the use of roborant and tonic remedies is indicated. Pepto-mangan showed to particular advantage in weak anemic children with reduced nutrition, and in the anemia of women, especially after large losses of blood, in which after a comparatively short period of administration (five weeks) a marked improvement both of the general condition and appearance of the patients, as well as of the character of the blood, manifested themselves.

Frieser regards pepto-mangan as a very efficient medicament which is entitled to a prominent place among the ferruginous preparations in ordinary use.

Finally, we would briefly recapitulate the observations published in this journal by Dr. Metall.‡‡

Twenty three cases were treated with pepto-mangan, of which twelve showed a normal hemoglobin percentage at the end of fourteen days, five after three weeks, and five after a month. One patient, however, afflicted with a hereditary disposition, showed after two months treatment only an increase to 75 per cent. In two cases of acute anemia, following a profuse hemor-

††Frieser: Some Remarks on Iron Therapy: the Therapeutic Value of Pepto-Mangan (Gude).—(Therapeutische Monatshefte, April, 1902).

‡‡Dr. Hermann Metall: A Contributor to the Therapy of Anemic Conditions.—(Med. Chirurg. Zentralblatt. No. 1, 1902.)

rhage, a favorable result was likewise obtained. In three women who had aborted during the first months of pregnancy, and made slow recoveries from the resulting anemia, a complete cure ensued after four weeks' use of pepto-mangan. In six cases of weakness and impoverished blood, after chronic and acute exhausting diseases, a subsidence of the feeling of weakness and considerable improvement of the general health were observed. Unpleasant by-effects were never noticed.

I cannot conclude my review of the chief publications in the literature of this subject without pointing to the gratifying fact that the pepto-mangan of Gude has secured a firm place among the most favored remedies, far beyond the borders of our country.

I would refer here only to two articles that appeared in the *New York Medical Journal*, by Dr. Hugo Summa, Professor of Pathology and Pathological Anatomy, and the other by Dr. C. A. v. Ramdohr, Professor of Gynecology. Judging from these two reports, both these American authors, while resorting in part to other methods of examination, reached the same results in regard to the effect of pepto-mangan in primary and secondary anemia as their European colleagues.

A New Symptom Observed in a Case of Adams-Stokes Disease.—Agenore Zeni describes a curious symptom, which consisted in a perfect synchronism between the respiration and the pulse beat. The ventricular contraction occurred only in coincidence with the respiratory act, and in fixed relation to it, that is to say, inspiration very slightly preceded the cardiac systole. This occurred, not as temporary phenomenon, but with regularity. The author holds that this is a new symptom of the disease, and that it is due to the fact that the moderating center of the heart is dependent upon the regulating center of respiration, and that the tonicity of certain inhibitory fibres of the vagus are lowered. In other words, during inspiration the activity of those fibres of the vagus which prevent the progress of the contractile wave through the various portions of the heart, is diminished or abolished.—*Medical Record*.

TUMORS*

BY PROFESSOR ROBERT LANGERHANS, BERLIN, GERMANY.

LIMPOMA, ADIPOSE TISSUE TUMOR.

Lipomata consist chiefly of true fat tissue. The individual cells are of exactly the same nature as those of the subcutaneous adipose tissue.

Two forms are distinguished: the *hyperplastic* and the *heteroplastic lipoma*. The first represents a local excess, an unusual increase of fat tissue, a local polysarcia. Every lipoma, like an ordinary adipose tissue, is composed of a number of fat lobuli. As, however, the individual fat lobuli are of variable size, are arranged to form irregular-sized larger lobules, and are separated by connective tissue septa of varying width, the same regularity does not exist in lipomata as in ordinary adipose tissue. If the connective tissue has the same density as normal fat tissue, the tumor is designated as *lipoma molle*. If, on the other hand, the connective tissue septa are unusually broad and compact, so that the whole tumor has a firm, hard consistency, the growth is spoken of as a *lipoma durum* or *fibrosum*. Occasionally the vessels are so richly developed that they predominate: *lipoma telangiectodes*; at other times calcification and ossification are present in the connective tissue stroma: *lipoma petrificum*, *ossificum*. The connective tissue may have also a soft, gelatinous consistency: *lipoma gelatinosum*, *colloides*.

Every large lipoma is always associated with hyperplasia of the fat cells. These do not originate from the old fat cells, but from connective tissue cells which proliferate and become filled with fat (liquid oil). When a number of lipomata develop in any individual, the process is never one of metastasis, but one of *multicentricity*. This, as well as the fact that lipoma becomes manifest only in middle and advanced age, indicate that lipoma may be acquired. Among the causes, alcohol is to be mentioned, which particularly favors obesity. In every instance, however, a local predisposition must also be present. This, like polysarcia, may be congenital and hereditary.

Lipomata usually show little disposition to spontaneous retrogression; indeed, it often happens that they undergo no

*Grundriss der Pathologischen Anatomie. Translated for *The Post-Graduate*, September, 1904.

diminution in size even in spite of marked general emaciation. Sometimes the central portions undergo softening, with the production of a cyst filled with liquid oil, from *necrosis* and disintegration of the cell membranes, probably the result of nutritive disturbances. In other cases decomposition of the neutral oil droplets and union of the liberated fatty acids with lime salts to form sebate of lime take place, giving rise to a mortar-like, friable mass.

As a consequence of repeated traumatism, a lipoma molle may develop into a lipoma fibrosum; or suppuration (abscess formation) or ulceration may occur, which readily assume a gangrenous character.

Hyperplastic lipoma is observed, firstly, in localities where adipose tissue is normally found, and, secondly, in those parts where loose connective tissue exists, which is transformed into fat tissue in polysarcia, *e. g.*, subcutaneous, subfacial, submucous, subserous, intramuscular, intraorbital, subperitoneal.

Three forms are differentiated:

(1) *Lipoma simplex tuberosum*, in the subcutaneous adipose tissue, *i. e.*, in parts which are flabby and folded, and in the radix mesenterii.

(2) *Lipoma capsulare*, in the periphery of any organ. *e. g.*, kidneys, heart, eye, mammæ, and in the periphery of a hernial sac.

(3) *Lipoma polyposum*, which begins as a smooth protuberance and gradually develops into a pedunculated polyp (subcutaneous, subserous, submucous). This develops most frequently in the *appendices epiploicæ* of the large intestine. By branching of the polypous form *lipoma aborescens* is produced. If the polypi have long pedicles, the pedicle gradually grows smaller until the lipoma finally becomes free. The external layer usually undergoes *induration* which ultimately results in a cartilaginous consistency. After interruption of the blood supply, the fat cells of the interior degenerate and form an oil cyst. In this manner the free bodies of the abdominal cavity: *corpora libera*¹ originate from the *appendices epiploicæ*.

Heteroplasmic lipomata also develop from connective tissue but in parts where fat cells are not normally present: in the

1. The *corpora libera* of the joints usually have another genesis: only exceptionally do they originate from pedunculated lipomata.

cortex of the kidney, in the arachnoides, in the scrotum (tunica vaginalis propria and tunica dartos). and in the labia majora.

MYXOMA (MUCOID TUMOR).

Mucous tissue is preëminently a fetal tissue and is everywhere present in the fetus in localities where adipose tissue subsequently appears. It forms, therefore, an early stage of adipose tissue. Fat tissue is sometimes transformed into mucous tissue, particularly in the subpericardial adipose tissue in atrophic conditions, in the bone marrow (gelatinous marrow), in the hilus of the kidney, etc,

This mucous tissue, like adipose tissue, may lead to the formation of tumors: *mucous tissue tumors*, or *mucous tumors*, *myxomata*. According as the tumor develops from preëxisting mucous tissue or from a tissue belonging to the group of connective substances, are distinguished *hemologous* and *heterologous myxoma*.

Mucous tissue has a soft, often fluctuating consistency, is infiltrated with a viscid, ropey, clear colorless or yellowish fluid which contains mucin (mucus) as a basic substance. In the younger portions chiefly round cells are present; in the older portions anastomosing spindle and stellate elements are found. Besides these, single intercellular fibrillæ are seen traversing the mucoid basement substance. A *myxoma* thus composed is called *hyalinum* or *gelatinosum*. If greater cell proliferation is present, which gives to the tumor a myeloid appearance, *myxoma medullare* is spoken of. *Myxoma lipomatodes* contains fat cells in a gelatinous basement substance. *Myxoma cystoides* develops as a result of softening and liquefaction, in that the cells perish. If more fibres occur in the basement substance, so that the tissue acquires a dense, firm consistency, the growth is then designated as *myxoma fibrosum*. By condensation of the basement substance and transformation into a cartilaginous structure (capsule formation around the cells), *myxoma cartilaginescens* develops; while *myxoma teleangiectodes* is distinguished by its great vascularity.

Myxoma of the placenta (*mola hydatidosa*, *vesicular mole*) frequently occurs in abortions, very rarely at full term (at birth). It develops from the fetal villi of the placenta. These consist, in the normal condition, of an epithelial covering (exochorion) and a mucoid basement substance (endochorion). *Myxoma of*

the placenta begins with proliferation of the epithelium and prolongation of solid buds of the endochorion. The buds develop into large vesicles, which in turn produce new buds. These, again, form new buds, and so on. This growth of the villi is sometimes accompanied by extensive proliferation of cells; sometimes, however, the cells also degenerate by mucoid transformation or fatty metamorphosis. The principal part of the basement substance consists of a relatively liquid, mucoid mass, which is expelled when the vesicles are punctured. Myxoma of the placenta deprives the fetus of nourishment and thus causes its death. The growth of the tumor may continue after death of the fetus. As a rule, a large mass, apparently composed only of a large quantity of blood and vesicles of varying dimensions (miliary to cherry size), arranged like a bunch of grapes, expelled at the time of abortion. Sometimes such myxomatous formations occur in limited amount, as *partial placental myxomata*, in connection with well-developed children born at term. Probably this growth is dependent upon an alteration of the endometrium (endometritis), the development of the maternal vessels being at the beginning unusually marked, thereby exerting a strong irritative action upon the surface of the ovum which leads to proliferation of the villi.

Not infrequently the formation of a *partial fibrous placental myxoma* is in its primary stage at the time of the abortion. This formation is the result of inflammatory changes of the endometrium, especially of endometritis decidua. The diseased villi form dense nodules which consist of firm myxomatous tissue quite rich in connective tissue fibers and cells.

In adults *myxomata* occur principally in regions where loose connective tissue and thick layers of adipose tissue are present: upon the thigh, back, hand and cheeks. These tumors are rare, but they sometimes attain large dimensions, and like lipomata, always have a lobulated structure. Frequently, they are so rich in fat cells that they represent true transition forms of the lipomata. They generally develop from the deeper parts, are subfascial and intramuscular. *Myxomata of bones* develop, as a rule, from the medullary tissue, frequently form mixed varieties, especially with *enchondroma*: enchondroma myxomatodes, and by bulging of the bone often attain considerable size.

Heteroplastic myxomata are more common than the previously described hyperplastic forms. They originate from tissues which belong to the class of connective substances. The connective substance of the *central nervous system* and *peripheral nerves*, the neuroglia and the neurilemma, especially frequently form the point of origin or myxomata: *glioma myxomatodes*. Here belong many tumors of the greater hemispheres, which are distinguished by their marked softness and transparent grey constency, discharge a mucoid fluid, collapse at the center, or pass over into true cystic formations; further, also the false neuromata of the peripheral nerves.

Myxoma of the female breast, like fibroma, starts from the interstitial tissue. Either the whole stroma of the breast gland is involved, giving rise to diffuse swellings, or the growth is confined to single lobes or lobules and leads to the formation of isolated nodules; or the tumor grows, like fibroma papillare intracaniculare, into the lumen of the milk ducts and fills them with the mucoid tumor masses: *myxoma proliferum*, *arborescens*. The glandular structure is thereby always more or less destroyed.

Mucoid tumors are occasionally found also in the *testes* and in the *lungs*, more rarely in the *salivary glands*.

Heteroplastic myxomata are distinguished by their great disposition to recurrence. Seldom they are malignant in the true sense of the word, and form metastases in different tissues. More frequently multiplicity occurs, especially in the peripheral nerves.

CHONDROMATA.

Cartilaginous tumors, *tumors cartilaginosi*, are divided into the *hyperplastic* and *heteroplastic* forms. The first are purely local formations, small outgrowths from pre-existing permanent cartilage: *ecchondroses*, while the heteroplastic forms, or *enchondromata*, develop either from a noncartilaginous matrix or from transitory cartilage, interrupted in its development into bone.

Ecchondroses are usually situated upon the costal cartilages, at the synchondroses (synchondrosis speno-occipitalis, symphysis pubica), the intervertebral cartilages and upon the permanent cartilages of the respiratory organs. They begin as small button-like swellings by proliferation of the uppermost

layer of the cartilage—the perichondrium: *ecchondroma verum simplex*. On further growth ossification very frequently occurs at the base: *ecchondroma ossificans*; sometimes retrogressive metamorphosis takes place, amyloid masses developing within the cartilage cells and the intercellular substance: *ecchondroses amyloides*. In other cases, vesicular formations develop within the cartilage cells: *physalides*. At the same time, the cells proliferating, the basement substance frequently softens so that the whole tumor consists almost entirely of vesicular cells: *ecchondrosis physalifera prolifera*.

Ecchondroses of the cartilages of the *larynx* and *trachea* are sometimes flat, sometimes nodular, generally directed inward, and but seldom lead to considerable narrowing of the lumen. In the *tracheal cartilages* *ecchondroses* occasionally develop from the upper and lower margins and, by coalescence, may produce a bridge-like union of several cartilages. Consequently the mobility of the trachea is decidedly interfered with.

Upon the *symphysis ossium pubis* the *ecchondrosis* is situated at the posterior margin and there forms a protuberance. *Ecchondrosis spheno occipitalis* is a cartilaginous outgrowth upon the surface of the *clivus* at the point of union of the sphenoid with the occipital bone. The *synchondrosis* of both of these bones generally ossifies at puberty. If the dura is penetrated by the *ecchondrosis*, the latter then protudes upon the inner surface of the dura as a knob or button.

Occasionally (in arthritis deformans) growths having sometimes a villous, sometimes a nodular form, develop from the outer margins of *articular cartilages* and hang into the joint. These are partly pedunculated, partly sessile. The former are moveable, may become separated from their pedicles and then constitute the *corpora libera* or *mobilia* (*joint mice*, *mures*, *articulars*.) On the other hand, the *free bodies* of the joints may develop also from the periosteum and the synovial membrane. The periosteal originate as outgrowths of the periosteum; these push the synovialis into the joint and there form dendritic branchings. The synovial excrescences likewise produce villous formations which at first are fibrous; at a later stage, however, like the periosteal, they become transformed at the ends into cartilage and finally, calcify or ossify. If parts of these growths become detached, *mures articulares* are

produced as in the former instance. The calcified corpora mobilia are called *arthroliths*. Some of these formations (especially the solitary) are round, oval or discoid, frequently patella-shaped; some (especially the multiple) are irregular, nodular and warty; in some, again, the remnant of a pedicle can be recognized. All these differ very greatly in size.

Aside from the corpora mobilia which develop from liomata (which see), there is still another group whose origin is traceable to traumatism. These are cases in which a part of the articular cartilage is detached. Sometimes the detached piece fits accurately into the fractured surface of the cartilage.

The broad, sessile *articular ecchondroses* may by their size produce considerable deformities of the joint and limit motion to a marked degree. All these cartilage formation are referable to irritative processes and are, therefore, most frequently found in *arthritis chronica deformans* (e. g. *malum coxæ senile*) associated with usur and eburnatio of the cartilage, thickening of the synovialis and wearing away of the bone ends.

Heteroplastic chondromata: *enchondroma* and *osteoid chondroma*, which is to be distinguished from the former, are of more frequent occurrence than hyperplastic chondroma. Both of these forms occur pure, as well as in many tumors mixed with other tissues: *enchondroma s. chondroma osteoides mixtum*. In these combination tumors the cartilaginous portion may be slight, forming small disseminated islands of cartilage, or occupy a large continuous part of the tumor. *Enchondroma* is frequently combined with *carcinoma*, and *osteoid chondroma* with *sarcoma*.

Enchondroma consists of hyaline, fibro or reticular cartilage. Chondroma osteoides usually contains quite small round, spindle-shaped and branching elements which have no capsule. The intercellular substance is very dense, quite highly refractive, homogeneous or only slightly striated, forms thick trabeculæ or a very narrow-meshed reticulum, so that only very small spaces and rarely cells are visible. On boiling, this intercellular substance yields glue, not chondrin; this decidedly distinguishes *osteoid chondroma* from *enchondroma*. There is also a soft variety of enchondroma: *enchondroma albuminosum*, characterized by an albuminoid intercellular substance which is frequently converted into mucus. Another

form, *enchondroma gelatinosum* (molle), likewise belongs to the soft varieties; it is rich in large stellate elements; sometimes it also contains a considerable amount of mucus; *enchondroma mucosum*. If certain parts of the tumor consist chiefly of cartilage and others of true mucous tissue, the tumor is either an *enchondroma myxomatodes* (when the cartilage is in excess), or a *myxoma cartilagineum* (when mucus tissue is in excess). *Enchondroma teleangiectodes* is decidedly vascular. These especially are the soft forms. The intense vascular development is not infrequently associated with partial ossification. *Calcification* (petrificatio) is more frequent, in which primarily the capsule, later also the true intercellular substance becomes the seat of calcareous deposits.

Softening and ulceration (particularly of the soft forms) begin with retrogressive fatty metamorphosis of the cells and transformation of the intercellular substance into a mucoid, ropy mass. At the same time, through solution of continuity, hemorrhages easily occur which, after a time, impart a yellowish and brownish color to the beginning cystic degeneration.

Erchondroma, especially that of *bone*, is a tumor of the earlier periods of life, and is occasionally even congenital. Probably many cases are referable to disturbances in the development of the bones. Rachitis especially, with its irregular and often serrated line of ossification, has repeatedly attracted attention in this respect, a number of cartilage foci, often surrounded by bone tissue, being found. Those parts of the bony structure in which ossification occurs late and often irregularly, appear to be most frequently predisposed to the formation of *enchondroma*.

Enchondromata of the soft parts offer less ground for an explanation of their origin. It must be remarked, however, that retention of the testes within the abdominal cavity, furnishes a decided predisposition. In very many cases tumor development begins after a trauma (fracture).

Two forms of *osseous enchondroma* are distinguished, the internal: *central*, and the external: *peripheral enchondroma*. *Central enchondroma* develops from the bone marrow or from the compact bone substance and is usually entirely latent. The more it grows, the more the bone is expanded, in that

the periosteum is excited to proliferation and deposits new osseous lamellæ exteriorly. The newly-formed bone capsule becomes gradually thinner as the process advances, because the formation of new bone cannot keep pace with the growth of the tumor. Finally, small platelets of bone are found upon the surface of the tumor only at isolated points. The growth of the tumor advances by the constant development of new foci in the form of nodules beside the primary and older focus. In this manner the tumor acquires a nodular exterior, and upon section has a lobulated appearance. The formation of new nodules frequently occurs in such a manner as to leave between mother- and daughter-nodules a small layer of apparently intact tissues. This, then, is the beginning of the formation of true metastases; the surrounding tissue becomes infected and more or less rapidly disappears with advance of the tumor tissue. In this way the tumor also invades the soft parts, the connective tissue forming the avenues for further development.

Peripheral enchondroma develops partly from the periosteum, partly from the surface of the bone itself. It has no period of latency and no osseous covering and usually does not begin to develop until late in life. Its most frequent seat is in the pelvis, particularly in those localities which correspond to the synchondroses and earlier cartilaginous points of union.

Enchondromata belong to the malignant tumors which form metastases. Very often the neighboring lymph glands are affected through metastases, and sometimes the internal organs (lungs). Solid enchondroma buds are not infrequently observed within the lumina of lymph and blood vessels,—a proof that the tumor masses grow through the vessel wall. In such instances tumor particles may readily be transported by the lymph or blood current.

Enchondromata of the soft parts are often mixed tumors. The cartilaginous portion always has a lobulated structure. The tumor develops from chronically inflamed connective tissue, which fact speaks strongly in favor of the irritative origin of enchondroma. Pure enchondroma occurs in the salivary and generative glands, the lungs, the subcutaneous adipose tissue and in the fascias. *Enchondroma of the lung* is generally located

in the hilus of the lung ; in rare cases in the central parenchyma, or beneath the pluræ. Among the salivary glands the sub-maxillary and parotid are especially liable to enchondroma formation. The female generative glands are somewhat less often affected than are those of the male. Enchondroma of the testes and likewise of the subcutaneous tissue are seldom pure. They are usually mixed tumors.

Osteoid chondroma has a rather smooth surface. It forms very large tumors, but manifests no pronounced tendency to form metastases. Its most frequent seat is in the long tubular bones, especially at the extremities, namely, the knee-joint ends of the tibia and femur. If there is not too great an amount of calcareous deposit, this form of tumor can be cut with the knife, because complete ossification very seldom occurs. Combination with *sarcoma* is frequent. Osteoid chondroma of the soft parts is rare and usually not pure.

OSTEOMA.

The *osteomata* consist of bone, are a typical osseous growths which develop from the *periosteum*, cartilage or some other tissue belonging to the connective tissue series. They are distinguished from the other histioid tumors, which occasionally ossify here and there, by the fact that the *whole* tumor is always finally transformed into bone tissue. If the preponderating element in mixed tumors consists of true osseous tissue, then these also are termed osteomata. According as the principal mass consists of compact, or spongy bone tissue, or of marrow tissue, the tumor is designated as *osteoma durum*, or *spongiosum* or *medullosum* respectively. The bone marrow may be red (lymphoides : corresponding to the state of growing cylindrical bone), or yellow (fat marrow), or gelatinous.

Two forms are distinguished : *hyperplastic* and *heteroplastic osteomata*. Exostoses belong to the first group. They have a local significance only and always remain stationary. *Exostosis cartilaginea*, which develops from cartilage, consists of a compact mass of bone with a cartilaginous and frequently somewhat irregular, nodular surface. In strong growth the part most centrally located generally becomes spongy ; later it is converted into marrow space so that the newly-formed bone marrow may unite with the true bone marrow. These exos-

toses are found upon the cylindrical bones (in the neighborhood of the intermediary cartilage at the point of insertion of the muscles), upon the shoulder blade, upon the pelvis and inferior maxilla. Their origin usually dates from the early period of life.

In *rachitic pelvis*, *pelvis spinosa*, the nodular and spinous exostoses are seated in the region of the synchondrosis ileo-pubica, *i. e.*, at that point where, in an earlier period of development, cartilage was present. For this reason authorities are inclined to assume that these exostoses are the result of cartilage proliferation.

The majority of exostoses have a connective tissue origin, and usually develop from the periosteum. A few originate from bone granulations, bone tissue being first transformed into granulation tissue (*e. g.* in consequence of an old ulcer of the foot) and this, later, again producing new bone.

While the term *exostosis* is always used to designate a more circumscribed, smooth or button-like also pedunculated compact outgrowth, by the term *osteophytes*¹ are understood more general, cortical, young porous bone growths, the product of a periostitis. *Periostosis* signifies cortical, compact swelling of the bone which extends over a large area, while *hyperostosis* means increased thickening of a whole bone or a whole section of a bone (*e. g.* hyperostosis calvariæ: thickening of the whole calvarium).

Leontiasis ossea is produced by hypertrophy of the bones of the face, and is frequently associated with nodular and spinous exostoses. *Partial hyperostoses* of the bones of the face are not rare. They are most frequently situated upon the maxillæ (especially the superior maxilla) and are the result of trauma or irritation proceeding from the teeth. In *arthritis nodosa* bony growths, which occasionally attain considerable size, are found upon the articular ends. *Supracartilaginary* exostoses are osseous proliferations which develop from the margins of the vertebral bodies, grow over the intervertebral cartilages and merge with exostoses of neighboring vertebræ and with the vertebræ themselves, so that adjacent vertebræ are united by osseous bridges over the intervertebral discs. *Exostoses of the skull* occur upon the internal and external surfaces as elevations and button-like, or pedunculated small tumors. These

1. These do not form tumors. See "Alterations of Bones."

very seldom attain considerable dimensions, but when they do and are located upon the internal surface they may become extremely dangerous by the pressure and irritation exerted upon the brain (epilepsy). In the larger exostoses the internal and external tables of the skull are frequently involved at the same time at the same point. Sometimes the exostoses possess a certain macroscopic and microscopic resemblance to ivory; *exostosis eburnea*. These are of very dense structure and, like ivory, consist of concentrically arranged lamellæ, and have a yellowish white color, especially when the bone begins to dry. They are usually situated upon sclerotic bone substance.

Upon the great toe two forms of exostoses occur: *exostosis subungualis* and *exostosis articularis*: after dislocation of the metatarsophalangeal joint. The former is situated beneath or at the margin of the nail and is characterized by intense painfulness. The second form is the result of illfitting and especially too pointed shoes, while, as is well known, the foot is broadest at the anterior part. As a result of dislocation of the great toe subluxation gradually develops; the surface of the joint comes in contact with the foot-covering and is irritated by the friction; a chronic *periarthrit*is is induced resulting in the formation of flat exostoses at the margin of the joint.

In contrast to exostoses stand, in a measure, *enostoses* which develop in the interior of the bone from the bone marrow. Osteomata developing from retained teeth possess a certain similarity to these. In contrast to true dental tumors, *dental osteomata*, stand *alveolar exostoses*. Dental osteomata consist either of an increase and enlargement of the cement substance in the form of hyperostosis or exostosis, or they are all small *cement exostoses* which are covered with enamel: *dentes proliferi*. If the tumor consists principally of dentine it is designated as *odontoma*.

Alveolar exostoses may develop from the periosteum of the alveolar process (especially as periostosis or hyperostosis) or, in the case of retained teeth, they form capsules around the imprisoned tooth: *bone capsule*, *bone cyst*. In consequence of this a pronounced protrusion of the jaw may occur. Retention of the teeth is sometimes caused by coalescence of the teeth (either *in toto* or only at the roots, or the crowns) in the deeper parts. If the dental pulp is replaced by a hard bony mass

(in injuries, caries; etc.), the process is designated as: *internal odontoma*. Sometimes dental tumors develop also from originally falsely placed teeth (dislocated, displaced dental germs), *e. g.* upon the gums, in the nasal cavity, etc.

Discontinuous exostoses always develop from parts which were originally or subsequently broken by trauma (*e. g.* by fracture). They are distinguished from the other forms by the fact that they are *moveable*.

To the osteomata of fibrous, tendinous and connective tissue parts connected with the periosteum belong *exostosis apophytica* and *tendinea*,—a progressive ossification of the tendons, fascias and muscles which begins in the bone. Occasionally these exostoses occur also discontinuously, *e. i.* not in connection with the bone, and are therefore moveable. Such discontinuous *tendinous ossifications* are the *ossa præcubica*, which develop close to the pelvis near the anterior margin of the os pubis and os ischii and extend for a greater or a lesser distance into the various muscles and fascia attachments of the thigh. The best known example is the so-called "*riding-bone*," which is either intimately connected with the pubic bone or affixed by ligamentous or fibrocartilaginous tissue. Here also belongs the so-called "*drill-bone*," occurring in the left deltoid muscle, which develops as a result of contact of the musket. All these osteomata are due to particular traumatism and activity of the affected parts.

Finally, to the class of hyperplastic osteomata belongs the sometimes significant osseous tumor which develops from excessive callus formation (*callus luxurians*) in connection with fracture: *osteoma fracturæ*. *Callus luxurians* is characterized by the fact that the callus is not confined to the fractured ends, but extends far into the surrounding parts, and even deep into the muscular structure.

The frequent occurrence of multiple exostoses does not depend upon metastatic formation but, just as in the case of solitary exostoses, is either the result of multiple local irritation or inherited phenomenon.

Heteroplastic osteomata always occur in soft parts and invariably from inflammatorily thickened or newly-formed connective tissue, *e. g.* from pleuritic adhesions. They occur in the arachnoides cerebialis and spinalis as flat plates or small,

rounded, angular or serrated islets which are smooth externally and roughened internally. Osteomata duræ are not infrequently found upon the inner surface of the dura mater, especially in the anterior portion of the falx cerebri. Small osteomata are found in the eye in the posterior portion of the choroid, rarer in the vitreous. Here they are usually found after phthisis bulbi resulting from antecedent traumatic or purulent destruction. Osteomata are of very rare occurrence in the *lungs*, and still rarer in the *skin*, where they occur in old people in the form of sand grains.

PSAMMOMATA.

These connective tissue tumors are characterized by the presence of *sand granules* (*psammos* — sand). The latter correspond in every particular to the normal sand grains (*corpora aranacea*) of the pineal gland in old people. They are small, concentrically lamellated formations which are calcified *in toto* or *only* at the center, and occasionally coalesce to form mulberry or sausage-shaped masses. These sand granules are enclosed in a more or less loose or firm connective tissue.

Psammomata not infrequently occur upon the surface of the dura mater, the small ones often in large numbers. They are frequently found in the choroid plexus. In this locality they sometimes attain the size of a walnut. Upon the inner surface of the dura mater psammomata form cherry-sized, hemispherical, smooth or roughened tumors of dense consistency and reddish, grey-white color. They may lead to compression and atrophy of the adjacent nerve substance by pressure. Psammomata very rarely occur in the brain, lymph glands, etc. Sometimes these formations are not pure psammomata, but so-called *psammosarcomata*, as soon as they become richly cellular or consist entirely of spindle cells. They are distinguished from genuine sarcomata by the fact they remain localized, do not form metastases and usually do not grow very large.

On the other hand, *psammocarcinomata* are in their nature, occurrence and course genuine carcinomata, and are peculiar only in so far as the so-called sand granules are of frequent occurrence in the stroma.

MELANOMATA.

Melanomata develop from increase of pre-existing pigmented

connective tissue cells and usually form only small, tumor-like nodules in the cerebral and spinal arachnoid, skin, suprarenal capsules, iris, and choroid. They are distinguished from the malignant mixed forms: *melanosarcoma* and *melanocarcinoma*, by their benign nature.

GLIOMATA.

Gliomata develop from the neuroglia—the peculiar connective and supporting tissue of the nerve centers. *Soft (medullary)*, *hard (fibrous)*, and *teleangiectatic* forms are distinguished. *Glioma medullare* is very richly cellular, scarcely any intercellular substance being recognizable. It is of very rare occurrence, while the mixed forms: *myxoglioma* and *gliosarcoma*, are frequent. *Glioma durum* or *fibroglioma* is rich in parallel fibrillæ which sometimes are so densely arranged that some portions of the tumor possess a cartilaginous consistency. It usually contains corpora amylacea.

Gliomata of the ependyma are of very frequent occurrence. They are small, submilliary, rarely hemp-seed sized, hard granules (*ependymitis granulosa*, particularly in chronic hydrocephalus).

Cerebral gliomata (most frequent in the white substance of the frontal and occipital lobes) sometimes reach very considerable dimensions (as large as an apple), and involve the surrounding brain matter without any definite line of demarcation. The center is usually somewhat denser than the periphery. The medullary form is more frequent than the fibrous. Owing to secondary changes the cut surface of the tumors usually presents a very variable appearance. The teleangiectatic forms are accompanied by a decided tendency to hemorrhages which occasionally obscure the tumor, especially as they may cause death under the semblance of apoplexy. In consequence of fatty metamorphosis, large portions often assume the appearance of smoked bacon, and by disintegration of the cells and softening of the intercellular substance cyst cavities are developed which, after a time, may contain quite clear fluid. By absorption of the watery constituents the albuminous substances in other parts become inspissated and transformed into caseous material.

These gliomata are almost always solitary, and even in long standing cases do not give rise to metastases. The larger the

tumor becomes the more, as a rule, the other parts (large ganglia, corpus callosum, etc.) are pushed aside and dislodged.

Gliomata of the cerebral nerves correspond in every way with those of the brain.

Gliomata of the retina develop from the supporting connective tissue fibres and the granular layer. They occasionally have a lobulated structure. As soon as the bulb is entirely filled with tumor masses, the lens and iris are pushed forward. On further progression a perforation exteriorly occurs (usually at the corneal margin); *exophthalmia fungosa* is developed, the dark red, readily bleeding, spongy tumor growing out in fungous form: *fungus hematoïdes*. These retinal gliomata sometimes form metastases, but, as a rule, they are not as malignant as the mixed tumor: *gliosarcoma* of the retina.

Unilateral Dislocation of the Jaw.—The failure of the classical method of reducing dislocation of the jaw is such a rare event that it seems hardly necessary to draw attention to a new method of reduction. As, however, one-sided dislocation, though much rarer than double dislocation, is often more difficult to reduce, it is well to have in reserve a simple, and at the same time effective, second mode of treatment. Such a method has recently been brought forward by Dr. Woodbury, of Philadelphia. He had failed utterly in his attempt to reduce a right-sided dislocation of the mandible by the classical method, and, after trying various devices, he was about to have the patient put under ether, when at her urgent request he made another attempt. Seizing the ramus and angle of the bone with his left hand, he pressed it downwards and backwards. While keeping up this pressure, he made her open and close her mouth gently several times, and when the mouth was nearly closed, a sudden gentle blow with his right hand on the left side of the chin immediately reduced the dislocation. The mechanism of reduction seems to be that the opening and closing of the mouth works the condyle backwards, and the slight application of force, taking the muscles *by surprise*, is sufficient to pass it into the glenoid fossa.—*Med. Press & Circular*.

SOCIETY PROCEEDINGS.

NEW YORK NEUROLOGICAL SOCIETY.

Joseph Collins, M.D., President.

SUCCESSFUL LAMINECTOMY FOR SPINAL CORD TUMOR.

Dr. Pearce Bailey presented a man who had been referred to in a communication to this society made by Dr. McCosh. The operation had been done by Dr. McCosh in May, 1900. In December, 1898, when thirty-nine years of age, the illness began with sharp, shooting and intermittent pain in the leg. It extended from the sacral region down the posterior surface of the limb to the knee. He did not work from November, 1899, until he came under observation in May, 1900. At that time he was suffering intensely and could only walk with difficulty even with the aid of a cane. The pain affected the left lumbar region, the back and the front of the thigh, although previously it had been confined to the sciatic distribution. Examination showed an atrophy of the left leg with weakness and diminution of the knee jerk on that side. There was very slight anesthesia over the area corresponding to the lower lumbar distribution, and also on the front of the thigh. There was some difficulty in passing urine. The anesthesia was considered very suggestive of tumor, involving as it did the anterior surface of the thigh. Laminectomy, involving the eleventh dorsal and down to the second lumbar vertebra, was done, and disclosed a bluish tumor, which was removed. The result of the microscopical examination left it uncertain whether the tumor was a small cell sarcoma or a mass of fibrous or granulation tissue, but the subsequent history pointed to the latter diagnosis as being correct. The man was able to continue at his usual occupation, which involved a good deal of muscular exertion, and experienced no trouble from the back, despite the laminectomy. Both knee jerks were present now, and the anesthesia had disappeared from the front of the thigh.

OSTEOSARCOMA OF THE SPINAL COLUMN; TREATMENT WITH COLEY'S FLUID.

Dr. Joseph Fraenkel presented a young man who had been well up to three years and a half ago, when he was struck in

the back. For the next six months he was able to continue at work, but then the pain in the back became severe. When seen by Dr. Abrahamson a diagnosis of Pott's disease was made, and this was confirmed by Dr. Gibney, and the patient was put in a plaster-of-paris jacket. About a year later, there was total paraplegia. He was then admitted to the Montefiore Home. There was absolute motor paralysis of both lower extremities with absence of the tendon reflexes. There was an area of anesthesia about the size of a dollar in the anal region. There was no tenderness, and no external evidence of disease of the spinal column. Three or four months later a projection developed, which was most marked at the tenth dorsal vertebra. Exploratory puncture revealed no pus. Two weeks later a large swelling appeared on either side of the vertebral column. An exploratory operation showed the tumor to be solid, and a portion was excised for examination. Dr. Harlow Brooks reported the growth to be a highly vascular sarcoma. Injections of Coley's fluid were begun on February 18, 1902, though some improvement had been noted before this time. The treatment was continued up to May 15th. At times the reactions were quite violent. After stopping the treatment the patient's general condition improved markedly, and the tumor diminished in size and became harder.

A CASE FOR DIAGNOSIS.

Dr. W. B. Noyes presented a man of twenty-six who fell three days previously from a building while at work. When seen yesterday he was walking on his tip-toes with the aid of crutches. Examination showed no sensory changes and no disturbance of bladder or rectum, and vision was normal. The reflexes were all increased. The case was presented for diagnosis. He looked upon it as hysteria, although he had thought of a slight hemorrhage in the upper part of the pons.

Dr. M. G. Schlapp said that the case suggested concussion of the spinal cord because of the spastic condition of the muscles that had been observed experimentally after injury to the cord.

SUBCORTICAL TUMOR ; OPERATION.

Dr. M. G. Schlapp presented a man who had been successfully operated upon for brain tumor. He had come to the clinic at

the Presbyterian Hospital in the middle of July with the fingers paralyzed in a claw position. There was paresis of the face; ankle clonus and increased knee jerk were present; there was no disturbance of the tactile sense. The condition began three years ago with a sudden convulsion lasting about half an hour. After about one week the patient developed Jacksonian epilepsy, and the attacks recurred about every three months. There was no history of congenital syphilis. The only history of injury was of being struck on the head by a barrel ten years before. A diagnosis of subcortical tumor was made. Dr. George Woolsey found on operation a cyst, about three inches in diameter, within which and adherent to its wall was a tumor. The latter was peeled out easily, and on examination, proved to be a fibroma. The patient's condition had improved considerably since that time.

Dr. B. Sachs said he had reported some years ago a case of large tumor developing from the wall of a cyst, an occurrence which he did not think was very uncommon. It was probable that the tumor had developed in the wall of an old congenital cyst.

A TUMOR FORMATION IN THE REGION OF THE COCCYX.

Dr. I. Abrahamson presented a child of one month with a tumor in the region of the coccyx, which had been noticed immediately after birth. There was no wasting and the reflexes of the lower extremities were normal. The tumor was situated at the extreme end of the coccyx, and the skin was freely movable over the tumor. There was no cleft in the vertebral column and no pulsation. The tumor appeared, on rectal palpation, to lie between the rectum and coccyx. Only on violent crying did the tension of the tumor vary. It was certainly not a spina bifida.

Dr. Robert Abbé said that it appeared to belong to the presacral tumors—really fetal remains, innocent in nature, though sometimes reaching a great size. They were easily removed, but some of these tumors had been known to shrink and almost disappear spontaneously.

A SPECIMEN OF MENINGOCELE.

Dr. M. G. Schlapp presented the brain of a child who lived three days, and died from some unknown cause. The brain

showed a meningocele with almost complete hypoplasia of the cerebellum. There was almost complete absence of the pons. It seemed as though the lesion had extended from the third primitive vesicle from which the cerebellum is formed.

DISCUSSION ON SPINAL CORD TUMORS.

Dr. Joseph Collins opened the discussion with a paper dealing with the symptomatology and operability of these tumors. He had collected 70 cases as a basis for his statements. These tumors, he said, were far more susceptible of surgical treatment than tumors of the brain; nevertheless the majority of spinal tumors proved fatal. There were four reasons for this, viz.: (1) The inability to diagnosticate and localize these tumors; (2) the nature and extent of these growths; (3) the great danger to life of the operations for their removal; and (4) the inability of securing the patient's consent to operation at a period when such treatment might prove successful. It must be admitted that the clinical picture presented by such cases was not that given in our books as indicative of spinal cord tumors. A fibroma would give rise to symptoms of as great severity as would a most extensive sarcoma. It was much more important to diagnosticate a tumor in the lower part of the dorsal region than to localize it at a single level—in other words, it was much more important to diagnose a tumor of the spinal cord than the structure from which it springs. If the location of the tumor were determined within from four to six inches he thought it would be near enough for the purpose of the surgeon. The favorite location of these tumors was in the upper and lower ends of the dorsal region. In the 70 cases that he had gathered from the literature, 35 were from the dorsal region, 15 from the cervical, 13 from the lumbar and sacral, and 7 were of wide-spread distribution—in other words, in 50 per cent. of the cases they were in the dorsal region. In many cases reported the pain was by no means characteristic, and in some cases it was not even a prominent symptom, as had been formerly supposed. From his personal experience, and a review of the literature, priapism was an uncommon symptom.

The speaker then reported a case occurring in a man, first seen in September, 1901. Four months previously he had begun to complain of pain in the abdomen, apparently due to

flatulent dyspepsia, and relieved when digestion was improved and the bowels regulated. About this time stiffness of the right leg began. Examination showed a Brown-Sequard paralysis on the left side extending above Poupart's ligament. A diagnosis of spinal cord tumor was made, and an operation urged, but not agreed to until about nine months later. He was then in a pitiable condition, and taken into hospital. The tumor was located by Dr. Abrahamson at the tenth dorsal vertebra, and at the operation, done by Dr. Samuel Lloyd, the growth was found at this point. The patient recovered from the operation, and has since then steadily improved although the long delay in operating precluded the possibility of a cure. The second case was that of a young girl, who became ill with what was supposed to be pneumonia in December, 1898. She remained in hospital over three months, and the following summer the diagnosis of Pott's disease was made at another hospital. The following autumn, on admission to the City Hospital, she was completely paraplegic, and had enormous bed-sores. Subsequently she died in the Montefiore Home, and the autopsy revealed a sarcoma at the level of the seventh dorsal segment. In the 70 cases collected surgical operation had been undertaken in 30, with a successful result in 12, partial success in 8 and unsuccessful in 10 cases. Of the 10 unsuccessful cases, death occurred in 4 cases from sepsis and septic meningitis, while in 4 others there were collapse, exhaustion, shock and hemorrhage. In 21 cases the nature of the tumor was stated. Of these 21, 4 were fibromata, 12 were sarcomata, 3 were endotheliomata and 1 was a myolipoma. According to the records, 44 of the 70 cases might have been operated upon. Fourteen cases gave autopsy records which indicated that they could not have been operable.

REPORT OF A CASE OF SPINAL CORD TUMOR OPERATED UPON.

Dr. Joseph Fraenkel reported this case. The patient was a woman of forty years. Three years and a half before coming under his observation she began to have slight pain in the right hypogastric region, and some time later in the buttock on the same side. Still later a painful area developed in the perineum. After all sorts of treatment she came under his care. At that time the right lower extremity was flexed, and

on attempting to put her on her back it increased the pain in the areas referred to. There was retention of urine and obstinate constipation. The right knee jerk was absent, while the left jerk was normal. Both plantar reflexes were absent. There was a curious trophic edema of the right buttock. The diagnosis of spinal cord tumor was made, situated in the cauda equina. The first nerve implicated must have been the iliohypogastric nerve, explaining the first area of pain. The patient was operated upon last April in the New York Hospital by Dr. Frank Hartley, and the patient reacted with difficulty. A tumor was found between the strands of the right half of the cauda. It was a reddish, pultaceous mass, which proved on microscopical examination to be a fibrosarcoma. Certain symptoms improved after the operation, but the patient died about two months later.

A Ferment that Produces Alcoholic Fermentation in an Alkaline Medium.—I have separated from the stomach, pancrea and muscles a peculiar ferment, that is capable of producing alcoholic fermentation in an alkaline medium. One peculiarity about it is that it is a very active ferment if kept in the dark for several hours.

After fermentation begins it is as active in direct sunlight as in the dark. I have kept it exposed to sunlight all day without any signs of fermentation whatever, but on the approach of night fermentation would begin and continue until the medium was rendered acid in reaction. Direct light seems to in no way impair its action, as I have kept it exposed for days, to the direct action of the sun, and found it as active as when first separated.

It first converts sugar into alcohol and then into acetic acid, and when the medium becomes acid in reaction fermentation stops, and upon rendering it alkaline it begins again.

I do not at this time desire to enter into any discussion of the function of this ferment, but only call attention to the discovery of it. In an article published September, issue 1904, ST. LOUIS MEDICAL AND SURGICAL JOURNAL I called attention to the separation of this ferment from the pancrea. Since the writing of that article I have separated the same from the cells of the muscles. In fact I have strong reasons to believe it exists in every tissue of the animal body.—*A. D. Barr, M.D., Cave City, Ark.*

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A. H. OHMANN-DUMESNIL, A.M., M.D.,

Editor and Proprietor.

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EDITORIAL.

IS A PHYSICIAN ENTITLED TO A FEE FROM ANOTHER PHYSICIAN ?

To more properly put this question the following query may be made: Are physicians entitled to compensation for professional services to each other or to members of each other's families? The case which has brought up this question is stated as follows by the *New York State Journal of Medicine*:

A member of the Association, residing in the upper part of the State, has recently written to another member of the Association living in New York City for his opinion as to the propriety of a charge made him by a specialist for services rendered to his, the physician's, wife. As this subject is one of great importance and interest, we publish the letter, which is as follows:

My Dear Doctor—I have a matter on which I would like to ask your opinion. I will withhold the name if you will pardon.

There is in your city a surgeon. He and myself and wife have been on the best of terms for the last six years. During

the first three years of our acquaintance I sent him (or referred to him) cases that for his services netted him \$3,600. One case he charged the patient \$1,500, the second one his fee was \$1,000, the remaining \$1,100 was distributed more or less over or between three or four patients. I did this because I liked him and on account of our friendly relations and not expecting any compensation for it.

Now, to get to the point in question. Two months ago, my wife was ill and called Dr. —, of —, to see her. He advised an operation. Mrs. A said she would submit if I could get the surgeon from New York to operate. I wired him, and the date of the operation was for June 4th last. He left his home Friday night at 1 o'clock and did the operation at my house Saturday noon, returning, arrived at his home Saturday night at 10 o'clock. He was accompanied by his operating nurse. My wife died at noon on the 6th, living forty-eight hours after the operation. After the operation I asked him what his fee would be. He hesitated and said: "Well, Doctor, give me what you can afford, but be as generous with me as you can, as my expenses for the last year have been large." I asked him to wait a few days. "Well, two or three days," he said. While talking I gave him \$50 and said: "Doctor, here is so much to apply on your services."

In a few days I received from him the following statement of his account:

	\$500.00
Discount,	200.00
	<hr/>
	\$300.00

with a foot-note: Please send check for the amount right away, as I am going abroad and would like to leave my books in as clear a shape as possible." I replied to his statement, asking him if he did not think his statement was more appropriate for laymen than for a brother practitioner, and calling his attention to our relations in the past.

He replied that his statement was made after a consideration that I was a professional brother and other conditions, and please send check for the amount right away. Now, Doctor, I just ask you if this is right for him to do this way. I have been in the profession for more than twenty years and am known all through this part of the country and can give the best of references as to character and reputation.

If you will kindly give me your opinion in this matter I will assure you that it will be held with the strictest confidence. I would say that I am a country practitioner and have no accumulations, only my home. Doctor, I want to do what is right in the matter. That is why I appeal to you for advice. I

have the opinion of doctors in ———. Awaiting your early reply, I am,

Yours fraternally, ——— ———.

P. S.—I am a member of the A. M. A. and the State and county associations.

The section of the Principles of Medical Ethics adopted by the American Medical Association in 1903 relating to this subject, Chapter 2, Article II, Section 3 (page 1023 of the Medical Directory) is as follows :

When a physician is summoned from a distance to the bedside of a colleague in easy financial circumstances, a compensation, proportionate to traveling expenses and to the pecuniary loss entailed by absence from the accustomed field of professional labor, should be made by the patient or relative.

Hence, it would appear, that the specialist acted in accordance with the principles laid down by the American Medical Association, in making the charge, and, being a reasonable one, it should be paid.

This is a rather summary decision in a case in which the testimony is vague, inadequate and incompetent. The plaintiff does all the testifying and the defendant none. Of course, the whole idea is a false one to expect the best of special talent for nothing, and the plea of expecting loss of time and actual expenses as a *quid pro quo* for some cases which were referred is rather a weak one. The path of the specialist is truly a thorny one, and under circumstances similar to the one related he is certainly tempted to let the public learn of his talents rather than the profession. We would certainly like to see the question discussed in a practical, sensible and dispassionate manner.

The Sixteenth Annual Session of the Tri-State Medical Society of Alabama, Georgia and Tennessee will be held at Chattanooga, Tenn., October 12, 13, 14, 1904, under the presidency of Dr. F. B. Sloan of Cowan, Tenn. The headquarters will be at the Read House.

Addresses will be delivered by Dr. William J. Mayo of Rochester, Minnesota, and Dr. A. J. Ochsner of Chicago.

Requests for places on the program or information in regard to the meeting can be had by addressing the Secretary, Dr. Raymond Wallace, Loveman Building, Chattanooga, Tenn.

The usual railroad rates will be in effect.

BOOK REVIEWS.

The Practice of Obstetrics. Designed for the Use of Students and Practitioners of Medicine. By J. CLIFTON EDGAR. Second Edition. Revised. Imperial 8vo. pp. 1153, with 1264 Illustrations, including five colored plates and 38 figures printed in colors. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$6.00 net.

The measure of a book's success is certainly the number of editions through which it has passed. But when the intervening time between successive editions is reduced to a minimum, we must certainly conclude that its success is nearing the maximum. These remarks are caused by a contemplation of the extraordinary as well as unprecedented success which has followed the publication of this magistral work. It is not often that a treatise like the one before us has its first edition exhausted and a second one issued in four months. This is certainly the finest encomium an author could wish to receive, and it is the greater from the fact that it is certainly fully deserved. The merits of this were outlined in an incomplete manner, it is true, when the first edition appeared, and the present one has been thoroughly revised by the author, additions have been made and the arrangement of the subject somewhat changed in a few places, with marked advantage to the work considered as a whole. We consider this quite a notable achievement, in view of the fact that the author had so little time for such a notable achievement. And the publishers certainly did themselves much credit in producing such a large work, practically new, in such a short space of time.

The present edition presents the evidence of most careful revision on the part of the author. Some portions have been entirely recast and to much advantage in our opinion. Under the head of Pathological Pregnancy there is to be found a section on the Toxemia of Pregnancy, and under this have been included nausea and vomiting, uterine, convulsions and coma and eclampsia. The section on Fever of the Puerperium has been entirely rewritten and brought to date under the heading of Morbidity in the Puerperium. Throughout the work we find the author has strengthened his position regarding the indications for embryotomy and Cæsarian section, which, from the standpoint of laboratory and theoretical obstetrics, appear to have been misunderstood and therefore criticised. As the author very pertinently says: "It is a far cry in obstetrics from the theoretical deductions of the library and the laboratory to the clinical conditions we find at the bedside." And it is this adhesion to the clinical experience he has acquired which has enabled the author to present us with such a masterly treatise

upon which both student and practitioner may rely. In fact, as a didactic and clinical work it is safe to say that its superior does not exist this day in the English language. The book is truly encyclopedic in character and pretty nearly covers the entire field of obstetrics, in both a thorough and scientific as well as practical manner. We cannot too highly praise this work, and our only regret is that we cannot devote more space to express our thorough appreciation of this great work.

Among some of the prominent features which distinguish this edition and to which we desire to call attention may be mentioned the fact that all the colored plates of the first edition have been remade, and it may be said that they are much better. In addition three new ones have been added—two of the toxemia of pregnancy and one of the stools of healthy breast-fed infants. In addition to this many of the illustrations of the first edition have been redrawn and forty-five new ones have been added, all of which most certainly have added to the value of this treatise in its present form. The publishers have certainly nobly performed their part in the matter, and it now remains for the reading medical public to give evidence of its appreciation of the work of both the author and his publishers. We can truthfully say that no physician can consider his library complete without this work on its shelves. We do not think that very much time will elapse ere a third edition will be issued, and, in the meantime, the author will be afforded another opportunity to prepare his magnum opus in such shape as to disarm even the most hypercritical; although, as it now appears, it seems to have already reached this stage.

We congratulate all who have contributed to its successful appearance in its present form and compliment them upon their achievement.

A Practical Treatise on Genito-Urinary and Venereal Diseases and Syphilis. By ROBERT W. TAYLOR, A.M., M.D. Third Edition, thoroughly Revised. 8vo. pp. 757. With 163 Illustrations and 39 Plates in colors and monochrome. [New York and Philadelphia: Lea Brothers & Co. 1904. Price, cloth, \$5.00 net; leather, \$6.00 net; half-morocco, \$6.50 net.

We could expect nothing but a good work from the former pupil and associate of Bumstead, and this is just what is presented to us. The author of the work before us is easily the *facile princeps* of American venereologists, and he retains his position of recognized authority in his chosen field both in this country and abroad. He is particularly strong in the matter of therapeutics, and it will be found throughout that his opinions are both sound and safe as well as valuable from a clinical as well as a theoretical point of view. His work is very complete

and he reviews every phase of venereal disease quite thoroughly. He does not hesitate to pronounce himself in unmistakeable terms and yet he cannot be looked upon as being dogmatic or prejudiced. To one who has had some experience in the study and treatment of venereal diseases he appears to be quite reasonable and fair-minded. This will certainly appear very forcibly to him who reads the work. It can certainly be said with truth that this treatise is one which will prove valuable to the medical student in the pursuit of his studies on venereal diseases and of the greatest help to him when he becomes a practitioner of medicine.

We will not enter into a critical analysis of the contents of this work and will only call attention to a few points brought out by the author. In speaking of the treatment of gonorrhea he still clings to the older methods as they have been enunciated by him in former editions of his work. Under the head *Fads in the Treatment of Gonorrhea*, the author reviews in no unmeasured terms the various methods which have been introduced of late years and he can find but little good in them. None of the substitutes for nitrate of silver has been found equal in its curative action to the original, and he devotes but little space to their consideration, in all of which views we certainly agree with him. He very thoroughly considers diseases of the bladder and of the prostate, and his consideration of hypertrophy of the prostate is certainly very thorough. In speaking of its treatment by Bottini's operation he is very conservative. Like many other genito-urinary surgeons, he states that the cases in which this operation is applicable are not numerous and should be carefully selected. In fact, too little is positively known about it to permit of a definite opinion being pronounced.

That portion of the book devoted to syphilis is very full as well as thorough. It is well illustrated and the author has drawn from his vast fund of clinical experience to make this part the most valuable portion to the practitioner. His descriptions of the various forms of chancre observed and their locality is excellent and highly demonstrative. We note a slight omission in his description of chancre of the tongue. He mentions the tip and the sides of the tongue as the sites where it occurs. We have had occasion to observe it on the dorsum and had occasion to report one case. We note further that he makes no mention of chancre *a distance* which is comparatively frequent in occurrence. With these few exceptions the book is very thorough. The author does not hesitate to pronounce syphilis curable in from two to three years, provided that the patient is otherwise in good physical condition, stating that this has been made possible by modern improved methods in the treatment of the disease.

We are much pleased with this edition of Dr. Taylor's Treatise, which has appeared in a comparatively short space after the large second edition which has been translated into Italian. The present volume has had twenty-five new illustrations and twelve new plates added, making the work more thorough and handsome. The publishers have brought it out in excellent style and we anticipate a large sale for this latest issue of Taylor's classic work. O-D.

The Doctor's Recreation Series. In the year 1800. By SAMUEL WALTER KELLEY, M.D. Series Edited by Charles Wells Moulton. 8vo. pp. 421. Illustrated. [Akron, Ohio.: The Saalfield Publishing Co. 1904. Price, silk cloth, \$2.50 per volume; half-morocco, \$4.00 per volume. Sold by subscription only.

Were we to characterize this interesting volume in a few words we should call it a medico-scientific biographical romance. As we are informed on the title page, it is the relation of sundry events occurring in the life of Doctor Jonathan Brush during that year (1800), and it certainly shows that this, his first year in practice, was certainly crowded with events deserving of more than a passing mention. All of which is related in that quaint style of composition which prevailed in the early part of the nineteenth century. Whilst it is purely a work of fiction it contains a sufficient number of facts, historically accurate, to imbue it with added interest, more especially when it contains an exact picture of the state of medical practice at that time in districts remote from the larger cities as well as in those cities themselves. We are introduced to Dr. Physick, of Philadelphia, and to his practice of bleeding to excess, which we all have learned from the accounts of his cotemporaries.

Dr. Brush introduces himself as a raw country lad who has a yearning ambition to become a physician. He is fortunate in having Dr. Ainstie for his preceptor in the study of physic and is soon trusted to practice on his own account. We cannot follow the story step by step, but a mysterious patient whom he confines is found to have been mysteriously murdered. Her body is buried and our hero and a friend in attempting to "resurrect" her body are surprised, the friend being arrested and lodged in jail. Young Brush escapes and goes to Philadelphia to study medicine in a college. While he is here the villain of the story lays a trap to kill him but is foiled, his confederate being killed by a blow in his jugular from the doctor's spear-lancet. Exposure, excitement and fear so react upon Brush that he contracts yellow fever and is numerously bled by Dr. Physick. Eventually he recovers and finally marries his sweetheart and they go to fresh fields and pastures new

in Ohio. The villain, of course, dies the death he deserves. Throughout this narrative there is an undercurrent of romance very deftly introduced. The villain is the one who murdered Dr. Brush's patient, his wife, and later on committed another murder, and also was a hot rival for the affections of Brush's sweetheart. The doctor finally triumphs through the constancy of the sweet girl and the unswerving faithfulness of his friends.

It must not be supposed that this volume contains nothing but the bald narrative of what we have sketched. A number of characters are introduced which lend life to the whole. A thread of anecdote and humor is introduced and many amusing incidents are related in the course of the narrative. A very interesting picture of Dr. Physick, both as a professor and as a practitioner, is drawn, and the account of a student's life at the Philadelphia Medical College which, at that time (1796), was in a rather dilapidated and rickety building. This book is so full of interesting events, descriptions and reading matter, that the best advice we can give our readers is to buy a copy and read it. We hope that the author will not stop here but write more of this sort, for his name will be enrolled among the literateurs of the medical profession on the merits of the book before us.

The publishers have produced this volume in handsome style, and the four plates drawn by E. P. Schultz are certainly excellent.

A Treatise on Obstetrics. For Students and Practitioners. By EDWARD P. DAVIS, A.M., M.D. Second Edition. 8vo. pp. 800. Illustrated with 274 Engravings and 39 Plates in Colors and Monochrome. [Philadelphia and New York : Lea Brothers & Co. 1904. Price, cloth, \$5.00 net ; leather, \$6.00 net.

The Treatise of Davis has been a popular one if we are to judge by the short time which elapsed when a call was made for a second edition. That it is fully deserving of this honor an examination of its contents will demonstrate. It easily ranks with the best works written in English on the subject of obstetrics. Whilst it must be admitted that a number of very excellent and superior treatises have recently appeared, dealing with this subject, it would be a difficult matter to positively assert that any one was the superior of the one before us. The author has subjected it to a very careful revision to bring it up to the date of its publication, and this is by no means an easy task when we take into consideration the many and important improvements and changes which have been made in the subject during the past twelve months.

The work before us continues to be, as it has been in the past, one of eminent practical character and worth. Besides

this it is thoroughly scientific, and the treatise throughout is original and quite comprehensive as it includes cognate subjects of great importance. Whilst taking into consideration undecided questions in obstetrics, the author will not lean to any particular view unless it agrees with his own practical experience. This is a point which should certainly inspire confidence in the author and one which, in addition, lends greater weight to whatever he writes besides increasing its value to him who turns to it for reliable information. The author has designed the book for the use of students and practitioners of medicine, and its contents will certainly prove of more than ordinary use and value to accoucheurs who will all, no doubt, avail themselves of the opportunity of possessing this latest issue of the treatise. Another reason for this may lie in the fact that the revision, which has been most thorough, has resulted in the addition of about two hundred and fifty pages, a by no means small increment, equal in quantity to the entire contents of some books on the same subject. There is but one subject that receives rather short consideration and is a cognate subject. This is teratology; but the short consideration of this subject may be due to the fact that there is a number of good works exclusively devoted to the subject, and the author prefers to refer his readers interested in this subject to those works which deal with it exclusively. The illustrations which were abundant and instructive in the first edition have also undergone thorough revision, and those engravings or plates which could be improved have been replaced. We have not the space at our disposal to make an analysis of the contents of the excellent book before us, but sufficient has been said to indicate its superior character and worth.

The publishers have made a handsome book of it typographically and from an artistic point of view. The plates are well executed, the illustrations well drawn, the printing is clear, the paper of a fine quality and the binding superior. We may add to this that at the price of publication it is a marvel of cheapness.

The Student's Handbook of Surgical Operations. By SIR FREDERICK TREVES, Bart., K.C.V.O., C.B., LL.D., F.R.C.S. New edition revised by the author and JONATHAN HUTCHINSON, JR., F.R.C.S. 12mo. pp. 486. With 121 Illustrations. (Abridged from the Author's Manual of Operative Surgery). [Chicago: W. T. Keener & Co. 1904. Price, \$2.50 net.

The present handbook is one which should appeal to every medical student. It is an excellent abridged edition of the author's larger classic work, and it contains all that is necessary for a student, and every portion would prove no less so for a practicing physician who is occasionally called upon to operate.

Whilst primarily intended for students to prepare themselves for their final examinations, it is certainly a very useful remembrancer for those who have passed those examinations and desire later on in their practice to recall some of the essential points connected with operative surgery. The book deals only with the most essential and most commonly performed operations. The editors, of which the author upon whose larger work this handbook is based, have very wisely omitted anatomical descriptions of those parts on which the described operations are performed. They have also omitted all matters save such as deal with the actual technical details of operative surgery. The large number of intricate but rarely performed operations which properly pertain to the special branch of plastic surgery, have also been omitted, with the exception of the common deformities of the lip and of the palate. All matters which offer room for speculation have also been avoided and the general principles of operative surgery are not discussed.

These judicious omissions have permitted of the presentation of quite a condensed volume of the highest value. Such operations as circumcision and tapping for hydrocele are not noticed, as they more properly come under the provision of minor surgery. With such revision as we have noted, this book is certainly a most useful one and also one which easily recommends itself to the student and teacher equally. Those acquainted with Sir Treves' larger work will certainly find this abridgement just what they need for rapid reference, and can hardly do without it. We can confidently predict that this new edition will meet with the success which has attended the former ones.

The book is handsomely illustrated and well printed on good paper. What makes it a very handy one to handle are its flexible covers, and the publishers are to be commended on the good appearance which it presents.

Strabismus or Squint, Latent and Fixed. A Supplement to the Errors of Refraction. By FRANCIS VALK, M.D. 8vo. pp. 171. Illustrated. [New York: G. P. Putnam's Sons. 1904. Price, \$1.75 net.

To some not thoroughly acquainted with the subject ophthalmology seems to be a field that has been thoroughly thrashed, and yet he who devotes his entire attention to the subject knows how much there yet remains to be done. And, as in all other special studies, it is some special part which is taken up and considered farther and in a thorough manner. It is for this reason that the author of the monograph before us did not look upon it as being incumbent to write any more upon the errors of refraction, but rather to write a contribution upon the imbalance of the ocular muscles, in view of the fact

that it has attracted so much attention during the past decade. In this extended essay he gives us the results of his personal experience in the examination and the correction of the imbalance of the eye muscles, referring those desirous of more extended study of the subject to Maddox, on the ocular muscles, and Hansell and Reber on muscular anomalies, etc.

The author after some introductory remarks gives a classification of squint and then speaks of esophoria, or latent consequent squint; exophoria, or latent divergent squint; hyperphoria, or latent vertical squint; and strabismus, or squint, concomitant or functional. Then follow illustrative cases. Indications for operations and operations for squint are considered, the book concluding with a chapter on the after-treatment of squint. The entire essay is a well considered one and the author shows very clearly that squint is not so easily determined nor does its cure entirely consist in tenotomy. The book is well written and a valuable guide to both general practitioner and to specialist alike.

A Manual and Atlas of Medical Ophthalmoscopy. By SIR WILLIAM R. GOWERS, M.D., F.R.C.P., F.R.S. Fourth edition. Edited by the Author and MARCUS GUNN, M.B., F.R.C.S. 8vo. pp. 289. Illustrated with 86 Figures and 10 Plates. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$4.00 net.

There was a time when it was held necessary for every practitioner of medicine to have a knowledge of the use of the ophthalmoscope, and to be able to properly interpret the pictures of the fundus of the eye which he saw. This was looked upon as a valuable aid in the formulation of a diagnosis of the patient's general condition, and more particularly of disturbed conditions of the brain and of the nervous system. To-day it will be found that the later generation of practitioners of medicine is rather deficient in this knowledge, and the habit of neglecting such examinations has not only rendered physicians careless in regard to the matter, but has resulted in much indirect injury to patients by not recognizing certain serious conditions at a sufficiently early date. The old-fashioned practitioner may not have been as advanced in making a scientific diagnosis, and may not have been as familiar with chemic and microscopic helps as he of later days, but he did have a working and practical knowledge of the ophthalmoscope and understood its lessons. The young physician who is able to use an ophthalmoscope these days desires to be an oculist and often is only an optician.

It is for these reasons that the book before us is a very timely one and very much needed at the present moment. The author is too well known to require any words of praise at

our hands. The book before us is written in a very systematic manner, and those acquainted with the methods of Sir Gowers know that what he writes is easily understood, as well as practical and valuable. He passes in review the changes of the fundus oculi in the various systemic diseases and affections and makes his descriptions clearer by the aid of well-executed illustrations. Not the least valuable among these are the ones in the ten plates of the atlas. These are not printed in colors but reproduced from sepia drawings by the author. He prefers this monochrome method from the fact that the changes which he describes are more related to forms than to colors. This is certainly a departure from the established custom, but it is an advantageous one, as deviations in form are more easily remembered than in colors. We are much pleased with this last edition which we know will be eagerly taken up by ophthalmologists, and teachers of this branch of medicine could do nothing better than recommend all medical students to devote attention as well as study to it. Medical practitioners would also find it to their advantage to resume the use of their ophthalmoscopes and thus avoid the necessity of resorting to the services of others for what they could accomplish themselves with but little trouble.

The publishers have issued this manual in unexceptional style, and the plates are artistically printed. The book is a very good one and deserves many readers.

On the Development and Anatomy of the Prostate Gland.

Together with an Account of its Injuries and Diseases and their Surgical Treatment. By W. G. RICHARDSON, M.B., B.S., F.R.C.S. 8vo. pp. 121. With 46 full-page plates. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$3.75 net.

This monograph is certainly an original study of more than ordinary worth and should be read with avidity by all genito-urinary surgeons. It is written in a scholarly style and was very justly awarded the George Yeoman Heath Scholarship Prize, which is limited to all graduates in medicine or in surgery of the University of Durham, England. The author begins with the anatomy of the prostate, an account of which he divides into two parts—the prostate gland and the relations of the prostate to the other organs and structures of the pelvis. Comparative anatomy is fully dwelt upon as well as the developmental anatomy of the prostate and the related parts of the uro-genital system. In his summary of this part of the subject the author states, among other things, that the male prostatic utricle and the female uterus and vagina have an origin distinct and different from that of the uro-genital sinus. He further states that the homology between the male prostatic

utricle and the female uterus and vagina is a demonstrable fact.

In speaking of the chronic enlargement of the prostate the author makes one statement to which we must take exception. Thus, on page 50, he makes the statement that "it (chronic enlargement of the prostate) is said to be uncommon among negroes, but it must be remembered that negroes do not often live to old age." We daily see too many aged negroes on the streets and in the hospitals to let this remark go by unchallenged. The author does not accept gonorrhea as a cause of the chronic prostatitis of advanced age, and his denial is certainly accompanied with some show of reason. The pathology of chronic hypertrophy is well considered, the author, however, objecting to the term as incorrect, whilst chronic enlargement conveys no idea of the structural changes in the gland. Retention of the urine and its treatment and the complications observed in cases of prostatic hypertrophy as well as their treatment are next considered. The treatment of chronic enlargement of the prostate is next taken up and, in the author's opinion, there is only one method and that is surgical. In addition to the methods advised he goes into details concerning the operations most radical in nature and most reliable in results, viz.: suprapubic prostatectomy and perineal prostatectomy. So far as castration as a curative measure is concerned, he will have none of it, as he has never observed any good results.

Following this we are given the clinical histories of some illustrative cases of acute prostatitis and of some complicated with malignant and other processes. This excellent essay closes with a tabular list of thirty-six cases of prostatectomy. It is an excellent monograph, well printed and excellently illustrated with original figures.

Transactions of the Medical Society of the State of New York. For the year 1904. 8vo. pp. 502. [Published by the Society. 1904.]

This volume of Transactions, like its predecessors, is a welcome visitor to our desk. It is full of good papers and the entire contents have been arranged in the best manner possible by the veteran Secretary of the Society, Dr. F. C. Curtis, of Albany, who, we are pleased to see, has again been elected to succeed himself. The Society certainly knows and appreciates a good or faithful officer as evidenced by this action on its part. The President's Address, by Dr. Algernon T. Bristow, on the present status of the Medical Expert, is one that deals with the question in no unmeasured terms, and he shows the flaws and weak points in the methods at present practiced.

There are fifty papers, in all—all very interesting singly and collectively. The first symposium is one of five papers on Diabetes. This is followed by a symposium on Nephritis, in which are included three papers. Next we have a symposium on Abdominal Pain, of two papers. A most important symposium is one of five papers devoted to Typhoid Fever. The last symposium consists of four papers, the subject being the Roentgen Ray. These symposiums alone would be sufficient to render the volume a valuable as well as interesting one, in view of the fact that all the contributors are among the best known workers in their separate fields, in the State of New York.

The leading medical men of New York City, Brooklyn, Albany, Syracuse, and other cities of the State of New York, have contributed their quota in all departments of medicine and surgery with the exception of Dermatology, Syphilology, and Genito-Urinary diseases. The eye and ear are well represented, and it is hard to understand that these particular branches should not have had someone to write and read some contribution on the general principles connected with them. Nevertheless the volume is a most excellent one and an honor to the Society and its officers.

The Physiological Feeding of Infants. A Practical Handbook of Infant Feeding, and Key to the "Physiological Nursery Chart." By ERIC PRITCHARD, M.A., M.D. (Oxon.), M.R.C.P. (Lond.) Second edition, greatly Enlarged and entirely Rewritten. 12mo. pp. 202. [Chicago: W. T. Keener & Co. 1904. Price, \$1.50 net.

There is certainly no gainsaying the truth of the old aphorism that "as the twig is bent the tree's inclined," and it is particularly applicable to the human organism as a whole. Infancy is the plastic age of man, and it is responsive to all of its environments and very sensitive to the dietetic measures applied to it. Thus, as the Ancients were wont to say, you cannot make a gladiator strong on infant's pap, and with equal truth we may advance the proposition that a child cannot attain a healthy growth unless its food is proper, and the nearer it is to the physiological standard the more proper and rational it is. As the author of the excellent and very practical handbook before us says, there can be no hard and fast rules laid down for the method of feeding of all infants, but each case must be studied and the best food adapted to its requirements is the one that should be adopted. He insists upon this, and rightfully, too, and physicians should not forget this most essential necessity.

He acknowledges the superior advantages of the American

system of percentage feeding, and he attributes a great part of his success to his adoption of it. He very pertinently says that the success or failure of any system of feeding depends upon the manner in which it is applied rather than on the method itself. The book is a very useful one and easily understood. As the author very pertinently observes, any intelligent nurse can understand it, and from our careful perusal of it we would say that any intelligent mother could also understand the principles which are therein enunciated.

Physicians will find it a very good guide and can safely recommend it to nurses and mothers alike, and many would find it very profitable to read it themselves. We are pleased to see the success which has attended the publication of this meritorious little manual. It is certainly deserving of all the encouragement which it can receive at the hands of the profession, and it should find its way in the book rack of every hospital where children and infants are treated. The type of the book is very good and it is excellently printed.

A Text-Book of Physiological Chemistry. For Students in Medicine and Physicians. By CHARLES E. SIMON, M.D. Second Edition, Revised and Enlarged. 8vo. pp. 500. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, \$3.25 net.

The problem of the elevation of the medical profession has been in great part solved by elevating the standard of medical colleges. The first step in this direction was in the way of furnishing a great deal of clinical instruction and this has been followed by the installation of laboratories and making laboratory work a necessary part of the curriculum. The microscopical, physiological, and pathological laboratories are the practical means of instruction which certainly do the greatest amount of good in the way of instructing. The bacteriological and chemical laboratories are of later date. By chemical laboratory we mean one in which physiological chemistry, necessarily organic, is demonstrated and students required to perform exercises. The subject is no longer mysterious and looked upon as alchemy. It has been placed in its true position and it has really become a fascinating study with the ardent student of physiology.

Dr. Simon's Text-Book before us is a very comprehensive book, useful not alone as a text-book but for reference as well. It is a very interesting little work as well as instructive. It is peculiarly adapted to the needs of the student who works in the chemical laboratory and is not solely devoted to chemistry, but embraces bacteriology as well. It is one which will make

an enthusiast of the serious student of physiology and a serious investigator of the physician. It is a book which can be unhesitatingly recommended to teachers of this branch and is an excellent introductory work for all those who intend later to pursue original investigations. The book has met with a measure of success, but hardly the amount which its merits deserve. We expect a third edition to be called for in a short time, and do not doubt that when it appears it will contain many additions like the second one has, as the subject with which it deals is being rapidly developed by earnest workers in this field.

The publishers have made a handsome volume of this book.

Serums, Vaccines and Toxines in Treatment and Diagnosis.

By WM. CECIL BOSANQUET, M.A., M.D. Oxon., F.R.C.P.
Lond. 12mo. pp. 344. [Chicago: W. T. Keener & Co.
1904. Price \$2.00 net.

This is a book which has long been needed by the rank and file of the medical profession who have but a hazy and indistinct idea of the whole subject. The author has made a very successful attempt to present to us an epitome of what is known, at the present time, concerning the subjects with which he deals. As he acknowledges, the entire subject is still in its formative stage and there is need of much more investigation to place it on a solid basis. We may remark with equal truth that the same can be said with equal truth of all the subjects in medicine which are now under discussion and investigation. Cure and immunity are considered in a very clear and logical manner. Ehrlich's side chain theory in regard to immunity is made quite clear and the subjects of vaccines, toxines and antitoxines are presented in a manner that is easily understood. Those who talk glibly of antitoxines and are not well posted on the matter will become so by a study of the chapters which the author of this book devotes to their consideration.

This little book is in the highest degree educational and comprehensible. It is not so highly scientific that none but an expert can understand it. It is plain, and the author is sufficiently well acquainted with his subject to be able to speak in a positive manner.

It is not to be supposed that he intends to be dogmatic, but rather to impress certain truths upon his readers. The latter will readily appreciate this and will themselves gain added confidence in their knowledge. The works on these subjects have hitherto been ponderous volumes and ultra-scientific in character, or have consisted of scattered articles in highly scientific journals only read by original investigators. It is for this and other reasons that this book will prove of real

and lasting benefit to practitioners and students alike and be of advantage as an introduction to more extended studies of the subjects with which it deals.

The Medical Epitome Series: Surgery. A Manual for Students and Practitioners. By M. D'ARCY MAGEE, M.D., and WALLACE JOHNSON, Ph.D., M.D. With an Appendix on X-Ray Work in Surgery by EDWARD O. PARKER, A.M., M.D. 12mo. pp. 295. Illustrated with 129 Engravings. Series Edited by V. C. Pederson, A.M., M.D. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, \$1.00 net.

This copy of Lea Brothers and Co's Epitome Series is certainly to be ranked among the best of this collection which have appeared thus far. This little book has been especially designed for the use of students and they will find it of especial value in preparing for examinations and in quizzing one another. For the latter purpose questions have been appended to each chapter, thus facilitating the asking of the queries principally concerned in the book and such as will prove of the greatest practical value and service to undergraduates. The authors and editor have done their work very well and the publishers have added to a clearer understanding of the subjects handled by furnishing a liberal supply of illustrations.

The concluding chapter is devoted to X-rays in surgery and it is well illustrated with seven excellent radiographs. The author of this has given us a well-written chapter and our only regret is that his space was limited. It constitutes a very fitting conclusion for a good and useful little book which will prove itself of great value to medical students. The publishers have brought out this book in their usual good style and at a very moderate price.

Regional Minor Surgery. Describing the Treatment of those Conditions daily Encountered by the General Practitioner. By GEORGE GRAY VAN SCHAICK, M.D. 12mo, pp. 226. With 74 Illustrations. [New York: International Journal of Surgery Co. 1904. Price, \$1.50.

The little book before us has fully demonstrated both its usefulness and its practicability to such an extent that a second edition has been called for in a remarkably short space of time. The author has subjected this edition to a thorough revision and some new chapters have been added. It is essentially based upon the twenty years' experience of the author in this special branch, and we are given the results of this rather than a compendium of others derived from their books. This cer-

tainly adds value to the book and gives him a greater opportunity unhampered by that awesome as well as gruesome spectre known as authority. It also divests the book of a great deal of unnecessary technicality and is calculated to give the general practitioner more confidence in himself to perform those minor operations whose necessity is daily to him in the course of his practice.

With this little book as a guide he is certainly justified in undertaking and successfully carrying out the operations described, and he should not permit himself to go beyond them until he becomes thoroughly qualified. We are pleased to note the appearance of this second edition and feel certain that its merits will necessitate the appearance of a third.

Handbook of Surgical Anatomy. By G. A. WRIGHT, B.A., M.B. (Oxon.), F.R.C.S. and C. H. PRESTON, M.D., B.S. (Lond.), F.R.C.S., L.D.S. (Eng.) 12mo. pp. 202—xi. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.50 net.

This little handbook contains much more that is useful than might be supposed at a superficial examination. It is peculiarly adapted to the needs of junior students and is written in a plain as well as instructive style. It deals with surgical anatomy as connected with surgery, medicine, and dentistry. This lends it an added value not only to medical students but to those studying dentistry, and is also of much value to those studying both medicine and surgery. This conjoint value is one which certainly should make the book one of more than ordinary value and usefulness to junior medical and dental students. This book has been a popular one in England, especially in Manchester where the authors teach. We are certain that it will also enjoy a large share of the same popularity in this country directly its merits become well known to American teachers and students.

The book is not illustrated as it is intended as a guide to further reading of large works and treatises, among which that of Deaver is prominently mentioned. This book is handsomely brought out and it will, no doubt, spring into instant popularity. The publishers are certainly deserving of praise for publishing such a handsome handbook.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

Transactions of the Medical Society of the State of New York for the Year 1904. 8vo. pp. 502. [Published by the Society. 1904.]

Serums, Vaccines and Toxines in Treatment and Diagnosis. By Wm Cecil Bosanquet, M.A., M.D. Oxon., F.R.C.P. Lond. 12mo. pp. 344. [Chicago: W. J. Keener & Co. 1904. Price, \$2.00 net.]

Handbook of Surgical Anatomy. By G. A. Wright, B.A., M.B. (Oxon.), F.R.C.S., and C. H. Preston, M.D., B.S. (Lond.), F.R.C.S., L.D.S., (Eng.) 12mo. pp. 202—xi. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.50 net.]

Regional Minor Surgery. Describing the Treatment of Those Conditions Daily Encountered by the General Practitioner. By George Gray Van Schaick, M.D. 12mo. pp. 226. With 74 Illustrations. [New York: International Journal of Surgery Co. 1904. Price, \$1.50.]

On the Development and Anatomy of the Prostate Gland, Together with an Account of its Injuries and Diseases and their Surgical Treatment. By W. G. Richardson, M.B., B.S., F.R.C.S. 8vo. pp. 121. With 46 full-page Plates. [Philadelphia: P. Blakiston's Son & Co. Price, \$3.75 net.]

A Manual and Atlas of Medical Ophthalmoscopy. By Sir William R. Gowers, M.D., F.R.C.P., F.R.S. Fourth Edition. Edited by the Author and Marcus Green, M.B., F.R.C.S. 8vo. pp. 289. Illustrated with 86 Figures and 10 Plates. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$4.00 net.]

The Doctor's Recreation Series. In the year 1800. By Samuel Walter Kelley, M.D. Series Edited by Charles Wells Moulton. 8vo. pp. 421. Illustrated. [Akron, Ohio: The Saalfeld Publishing Co. 1904. Price, silk cloth, \$2.50 per volume; half-morocco, \$4.00 per volume. Sold by subscription only.]

A Treatise on Obstetrics. For Students and Practitioners. By Edward P. Davis, A.M., M.D. Second Edition. 8vo. pp. 800. Illustrated with 274 Engravings and 39 Plates in Colors and Monochrome. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, cloth, \$5.00 net; leather, \$6.00 net.]

The Physiological Feeding of Infants. A Practical Handbook of Infant Feeding, and Key to the "Physiological Nursery Chart." By Eric Pritchard, M.A., M.D. (Oxon.), M.R.C.P. (Lond.) Second Edition, greatly Enlarged and entirely Rewritten. 12mo. pp. 202. [Chicago: W. T. Keener & Co. 1904. Price, \$1.50 net.

The Practice of Obstetrics. Designed for the Use of Students and Practitioners of Medicine. By J. Clifton Edgar. Second Edition, Revised. Imperial 8vo. pp. 1153. With 1264 Illustrations, including five colored plates and 38 figures printed in colors. [Philadelphia: P. Blakiston's Son and Co. 1904. Price, \$6.00 net.

A Practical Treatise on Genito-Urinary and Venereal Diseases and Syphilis. By Robert W. Taylor, A.M., M.D. Third Edition, thoroughly Revised. 8vo. pp. 757. With 163 illustrations and 39 Plates in Colors and Monochrome. [New York and Philadelphia: Lea Brothers & Co. 1904. Price, cloth, \$5.00 net; leather, \$6.00 net; half-morocco, \$6.50 net.

The Student's Handbook of Surgical Operations. By Sir Frederick Treves, Bart., K.C.V.O., C.B., LL.D., F.R.C.S. New Edition Revised by the Author and Jonathan Hutchinson, Jr., F.R.C.S. 12mo. pp. 486. With 121 Illustrations. (Abridged from the Author's "Manual of Operative Surgery.") [Chicago: W. T. Keener & Co. 1904. Price, \$2.50 net.

THE MEDICAL EPITOME SERIES:

Surgery.—A Manual for Students and Practitioners. By M. D'Arcy Magee, M.D., and Wallace Johnson, Ph.D., M.D. With an Appendix on X-Ray Work in Surgery. By Edward O. Parker, A.M., M.D. 12mo. pp. 295. Illustrated with 129 Engravings. Series edited by V. C. Pederson, A.M., M.D. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, \$1.00 net.

A Text-Book of Physiological Chemistry. For Students in Medicine and Physicians. By Charles E. Simon, M.D. Second Edition, Revised and Enlarged. 8vo. pp. 500. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, \$3.25 net.

Strabismus or Squint, Latent and Fixed. A Supplement to the Errors of Refraction. By Francis Valk, M.D. 8vo. pp. 171. Illustrated. [New York: G. P. Putnam's Son. 1904. Price, \$1.75 net.

Los Angeles Medical Journal has recently come to us although it was started last January. It is a neatly printed octavo monthly of 48 pages, which is the Official Publication of the Los Angeles Academy of Medicine. Dr. Charles B. Nichols is editor and he does his work well. The subscrip-

tion price is \$1.00 per year and it presents all the indications of being a success. The original articles are good, the editorials well written, and the various sections edited by a corps of collaborators.

The Medical Book News, published by Messrs. P. Blakiston's Son & Co., of Philadelphia, has already established itself as an indispensable publication for all reading physicians. The literary contents of this valuable publication are exceedingly interesting under the able editorial management of George Sands Goodwin, who promises to continue to improve the character of the publication. Richard B. G. Gardner, 2d, has shown his perfect efficiency to act as Business Manager and he will continue to devote his best energies to making the *Book News* a regular visitor at every physician's office. This should not be a very difficult task in view of the fact that the subscription price is only fifty cents a year.

MELANGE.

Fifteenth International Congress of Medicine, Lisbon, April 1906.—We have received the Second and third numbers of the *Journal of the Fifteenth International Congress of Medicine*—Lisbon, 1906. They contain the report of the actual state of affairs and the most important resolutions of the Central Committee: attention is called to the Colonial Exposition that will be organized at the time of the Congress and the inquiry about Pellagra in Portugal, an enterprise undertaken by the section of Psychiatry. In the two numbers is the list of the subjects of official reports with the name of the authors that have accepted the charge. In every section there is also a list of recommended themes for free communications. Lastly, the *Journal* publishes the list of the national committees of the several countries where they are already formed—that is, in nearly all.

Those Filipino Students.—The six Malay Filipino students who have entered the Medical Department of the University of Missouri will probably cause some little revision of the Missouri idea of these people. We, Missourians, are so thoroughly imbued with the notion that the Filipinos are negroes that it is really disappointing when ushered into the presence of these

boys expecting to see typical Sambos to find that they belong to an entirely different race, the Mongolian, and that in appearance and mental acuteness they closely resemble the Japanese. One of them expressed considerable surprise that the American should take the Igorrotes as typical Filipinos, saying it would be just as fair to take the American Indian as a type of the average American. Although this is perhaps putting it too strongly, it is a fact that if these students are typical of the more intelligent inhabitants of our new possessions we will have to revise our ideas concerning them. The six boys at the University are polite gentlemen and show the marks of good breeding. Laggo's father owns a sugar plantation where more than a hundred hands are employed: the sires of the others are merchants in Manila. Young Laggo, just mentioned, a little, brown-eyed, talkative fellow whom his companions have nicknamed "Buster Brown," speaks intelligently upon as many subjects as the average American boy of seventeen years. When asked how his people liked American rule he replied: "It is better than Spanish rule, but the Filipino people want independence."

All the boys are graduates of four-year colleges and have studied medicine one year at the "Universidad de Sto. Tomas" in Manila which will probably give them some advanced standing at Missouri. The Insular Government by which their expenses are paid will allow them to remain in Missouri three years.

New Fatal Disease Attacks Children.—The attention of the Medical Department of the University of Missouri has just been called to a new fatal disease which somewhat resembles tropical dysentery that has been raging for six weeks near the little town of Wion in Chariton county. Fifty per cent. of those attacked have died within a few days. Children are the chief sufferers, those from eighteen months to four years of age rarely ever recovering when once stricken. Grown persons have been attacked in a few instances, but have recovered. Dr. A. H. McAlester, Dean of the Medical Department of the University, who was called to the scene of the epidemic as a representative of the State Board of Health, says:

"Smallpox is a luxury compared with this disease. Within a radius of three miles from Wion, fifteen children have died

in six weeks and dozens of others are now at the point of death. I visited one home where five children lay sick of the disease. Fifty per cent. of those attacked die and a young child has scarcely one chance in a thousand of surviving it. We have as yet, found nothing to indicate where the disease came from nor what it is, though it closely resembles tropical dysentery. Dr. A. J. Detweiler, Bacteriologist to the State Board of Health, is on the ground making a thorough investigation and the Board will soon be able to make a complete report to the medical profession of the State.

Toxic Properties of Tea and of Coffee.—Both tea and coffee are excitants of the nervous system, producing sleeplessness through increasing the action of the heart. This condition is followed by reaction, which in sensitive subjects approaches a toxemia, comparable to that from the abuse of alcohol or opium. The symptoms from acute or chronic caffeism are feelings of apprehension, with a vague nervousness, tremulousness, vertigo and various digestive disturbances. The effects may prove more deleterious than mere temporary annoyance, and may lead to persistent functional disorder of the nervous system. Within recent years Dr. Haig has pointed out a still further danger from these beverages. He has shown that they are carriers of xanthin products, which load the tissues with uric acid, and occasion the body various disorders due to the presence of that excrement.

Coca has, happily, none of these ill effects, while possessing all the advantages of an exhilarating stimulant that might well be employed as a daily beverage. Mariani, of Paris, prepares a fluid extract of Coca, termed *The Mariani*, which represents all the qualities of true Coca. A teaspoonful of this in a cup of hot water—with sugar and cream if desired—forms a very pleasant drink, not unlike a good breakfast tea in flavor. This is not only a stimulant to digestion, but will aid the system in the performance of its functions, instead of gradually loading up products in the tissues which will ultimately impede activity. As a tonic-stimulant, *Vin Mariani* may be taken either before or after meals. It will promote assimilation and impart a sense of well-being. Coca does not excite to an excess of nervous effort, but has a marked influence upon muscular tissue, through converting certain stored-up elements into useful-

ness. Thus it is a true, reconstructive tonic which will tend to maintain the balance of the system in its wear and tear of existence.—*The Coca Leaf*, November 1902.

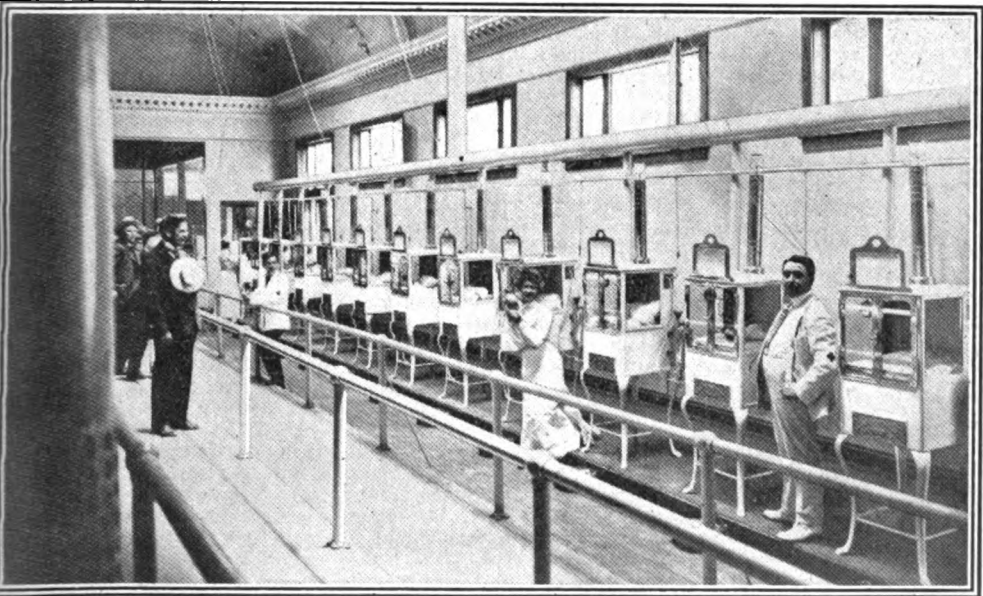
The Common Flea.—Of all insect pests that prey upon mankind perhaps the oldest and the most widely distributed is the common flea. It is found in all parts of the habitable world, even in the ice huts of the Esquimaux, although by preference its happiest hunting grounds are in warm and temperate zones. The habits of this tiny insect have been carefully studied by naturalists, and are full of fascinating interest. During the breeding season, for instance, the lady flea deposits from eight to twelve little grey eggs in the cracks of the flooring or in some other convenient shelter. In five or six days, if the weather be warm and seasonable, the eggs hatch, and tiny little grubs are launched into active existence for about eleven days, when they turn each into a chrysalis or pupa. In another twelve days the fully fledged flea issues forth armed and competent to enter upon his fierce and blood-thirsty career. The length of time occupied in the passage from egg to fully-formed flea is therefore about four weeks, and it may readily be understood that under favorable circumstances as to warmth and food the rate of production may be simply enormous. During the whole of the grub stages the female flea feeds her offspring with tender solicitude. So far as we can discover, that tenderness constitutes the sole redeeming feature to be discovered in the outcast parasite. The bite of the insect conveys some sort of poison that promotes a flow of blood to the part bitten, and thus enables it to obtain a maximum result with a minimum of exertion. The diabolical ingenuity of that device is singularly characteristic of this most pernicious creature. The fleas of cats and dogs, of fowls, and of some other lower animals, are of species different from those of man. The worst of it is that cat and dog fleas are always ready to stray from their proper pastures to take a stray meal on mankind. The fact that fleas are at one period of their lifetime helpless and feeble little grubs may suggest a plan of campaign of the highest value to the careworn householder. For instance, occasional scrubbing of floors and woodwork with carbolic soap and hot water during the summer months should rout the enemy effectually, no matter what his strength in position and numbers. Science must triumph in the long run, even against so agile and multitudinous a force as the common flea.—*Med. Press & Circular*.

MISCELLANEOUS NOTES.

Intestinal Parasites.—Messrs. Battle & Co., have just issued the third of a series of twelve illustrations, of the Intestinal Parasites, and they will be sent free to physicians on application. The plates are not only interesting but valuable and instructive.

Hagee's Cordial of Cod Liver Oil Compound is one of the most popular cod liver oil preparations on the market. All the nutritive properties of the oil are retained and the disgusting and nauseating elements are eliminated. Combined with hypophosphites of lime and soda it offers to the profession a reconstructive of great value.—*St. Louis Medical Review.*

N. C. Vaughan, M.D., of Cincinnati, O., graduate Howard University, Washington, D. C., 1896 member National Colored Physicians and Surgeons, member Ohio State Medical Society, member Cincinnati Academy of Medicine, writing, says: "I most cheerfully recommend Sanmetto for prostatic and bladder troubles. It makes peace with the stomach, is readily assimilated, has special affinity for the urinary tract, healing and giving tone to the diseased parts."



Interior of Main Incubator Ward, Showing Incubators and Air Shaft Drawing and Filtering Air From Above Roof of Building, World's Fair

Babies are the joy of the earth, so that the Infant Incubator becomes an intensely human display of the actual incubation of tiny living fledglings. The infants are seen through the glass doors of their strange nests, where they remain for forty days. They are fed in public every two hours by trained nurses.

Peptogenic Milk Powder.—A physician writes: Messrs. Fairchild Bros. and Foster, New York City. Dear Sirs:—Regarding your preparation, "Peptogenic Milk Powder," I have to say that for some time it has had a limited use in my practice, but not until I used it with my own child did I fully appreciate its merits. My child, now six and one-half months old, has for six months been fed exclusively on milk modified by this excellent preparation, and I could not wish for a more perfect artificial infant food or for better results than those obtained. I am now using it almost exclusively where artificial feeding is required in my practice and with most gratifying results. Very truly yours, (Signed), M.D.

Comment on Antikamnia and Heroin Tablets.—Under the head of "Therapeutics," the *Medical Examiner* contains the following by Walter M. Fleming, A.M., M.D.,* regarding this valuable combination: "Its effect on the respiratory organs is not at all depressing, but primarily it is stimulating, which is promptly followed by a quietude, which is invigorating and bracing, instead of depressing and followed by lassitude. It is not inclined to affect the bowels by producing constipation, which is one of the prominent effects of an opiate, and it is without the unpleasant sequels which characterize the use of morphine. It neither stupefies nor depresses the patient, but yields all the mild anodyne results without any of the toxic or objectionable phases. When there is a persistent cough, a constant "hacking," a "tickling" or irritable membrane, accompanied with dyspnea and a tenacious mucous, the treatment indicated has no superior. In my experience I found one "Antikamnia and Heroin tablet," every two or three hours, for an adult, to be the most desirable average dose. For night coughs, superficial or deep-seated, one tablet on retiring, if allowed to dissolve in the mouth, will relieve promptly and insure a good night's rest. In short, it will be found futile to delve for a more prompt and efficient remedy than "Antikamnia and Heroin tablets," in all bronchial complications with laryngeal irritation, dyspnea, asthma, winter cough, and general irritability of the thoracic viscera."

*Qualified Examiner in Nervous and Mental Diseases for Supreme Court, New York City.

The Esquimau Village.—Of all the concessions on the famous Pike at the St. Louis World's Fair, the Esquimau Village abounds most in features that are novel, amusing and instructive. It is inhabited by two tribes of Esquimaux—one from Alaska and one from Labrador—who live out their simple lives in "igloos" or snow huts and "topeks" (tents of sealskin) in full view of the visitor. In the splendid stage performance these primitive people give an exhibition of their sports and pastimes that is of never-failing interest, but which is impossible of description within brief limits. Especially interesting is that part of the entertainment given on the Village Lake, wherein is portrayed the Chase of the Seal. It is realistic in the extreme, and the dexterity with which the Esquimaux hurl their harpoons is astonishing. Another exhibition of skill which delights old and young is that in which these strange people use dogwhips, with lashes twenty-five feet in length. With a crack like the report of a pistol they can flick a dime from a stone on the ground at a distance of eight yards from the whipman, and repeat this feat time and again with amazing accuracy. A trip "Over the Yukon Trail" is one of the novel experiences of the visitor to the Esquimau Village. The trail leads around and over snowy peaks, and the journey is made in a sleigh drawn by a team of five "huskies," or Esquimau dogs. It needs but a breath from the Pole to complete the realism of the scene. To those studiously inclined, the Craine Alaskan Museum offers absorbing attraction. It

embraces the largest and most complete collection of Arctic curios in existence, and is a revelation to those who have imagined the high latitudes as a barren waste. A native guide shows visitors through the great hall. The crude methods employed in Gold Mining on the Yukon are exemplified in the Esquimau Village by a miner fresh from the fields. He pans out the gold from the gravel, and interestingly illustrates the toils and hardships of the delver after riches in the far away frozen North. In short, the concession carries the visitor along the picturesque, the odd, and the unbeaten tracks of life, and while it amuses and diverts, it never fails to instruct. The Esquimau Village is the novelty of the Pike.

Benguiat Collection of Ancient Art.—Wonderful Museum of Rugs, Tapestries, Textiles, Ecclesiastical Relics and other priceless articles just opened at World's Fair. The western taste for things oriental has increased marvelously within the past few years, especially since America has become in actual fact a world power. It is more than probable that the contact with an older civilization and a finished art is the one experience we, as a nation, require in order to produce that perfect and symmetrical development that marks the finished gentleman.

The cultivation of a taste for art usually begins with mere curiosity or a desire to do the proper thing, and it is more than likely to end with the mania of the collector, if money and leisure are not wholly lacking. The man who has the collecting instinct properly developed will count it no hardship to go without a meal or work overtime in order to possess one more treasure for his cabinet.

The collector is not always a good friend to himself and his family, but there is a chance for him to be a good friend to humanity. Such a collector is Hadji Ephraim Benguiat, the oriental rug king and dealer in works of art, whose wonderful Pavilion at the World's Fair has just been opened to the public. The unique structure that is located on International avenue, across from the Palace of Forestry, Fish and Game and in the immediate neighborhood of the pavilions erected by Brazil and India, contains the most marvelous and the most complete collection of oriental rugs, enamels, gems and historical and ecclesiastical treasures that have ever been brought together.

The permit for constructing the building was not granted until six weeks after the opening of the Exposition; indeed not until Mr. Benguiat began to realize the magnitude of the St. Louis and International Fair and the consequent opportunity which it offered him of doing his own peculiar kind of missionary work. The collection is so well known to art connoisseurs that it was a subject for regret to the officials of the Fine Arts section that the entire collection could not be housed in the Palace of Fine Arts.

Mr. Benguiat, who descends from a Spanish stock of very ancient and honorable pedigree, is a gentleman of great wealth, and the objects in the Pavilion are absolutely not for sale. They are on display at the World's Fair solely because the owner feels that the rest of the world ought to have an opportunity to study and enjoy his priceless possessions. He is convinced that contact with the beautiful is the greatest civilizing and ennobling agent in the world.

The most remarkable part of the exhibit is the room at the rear of the large galleries. This apartment is a restoration—not a reproduction, for the material is all original, of a room in the Damascus palace of the period of the Caliphs. The walls are covered with the most intricate gesso-duro, or painting in relief, set with tiles that are matchless for design and color. In the center of the apartment is the fountain that cooled the perfumed air of the Caliph's royal hall. The inscriptions on its side give ample evidence of the date and the purpose

for which the fountain was designed. The furnishings, tapestries and paintings are all from Damascus, and are of the 14th century.

Among the other art treasures is a notable collection of costumes and church vestments. The larger collection of objects of Jewish ceremonial has been deposited in the Smithsonian Institution in Washington, and several of the pieces now on display at the World's Fair will be sent to Washington at the close of the Exposition.

Among the oriental rugs are several from the famous collection made by Henry Marquand, President of the Metropolitan Art Museum of New York. One of these was purchased at the Marquand sale for \$38,000, and the following day Mr. Benguiat was offered almost that sum for it. No money would tempt him to part with it, for it was necessary to finish out a series in his collection.

Another priceless rug that may seen is the Alhambra silk rug, the ground of which resembles tapestry. The raised design resembles the hand-woven knot used in the very finest of the antique Persian rug. In this wonderful piece of fabric the royal purple of the Moorish monarch of Spain is used, thus proving that the rug was at one time the property of Abdurrahman II., that extravagant patron of art. The royal silk carpet must prove a joy to the rug connoisseur. It is much larger than the Alhambra rug and is of Persian handiwork. Its texture is so close and its pile so thick that the labor of eleven rug makers for a period of 28 years was required to weave it.

The exhibit of textiles includes rare treasures that were taken from Greece by the Turkish soldiers during the Græco-Turkish war. Another collection of looted valuables is that which was taken from the churches in the Philippines either by the Spaniards or the Americans or perhaps by the native soldiers. Many of these objects are survivals from the period of Spain's greatest development and glory.

To the devotee of beautiful poetry nothing in the entire World's Fair could afford greater delight than the marvelous pair of Satsuma vases, of a type of which there are but two other pairs in the world. The decorations of these vases illustrate the poems of one of the most celebrated Japanese poets. There are 54 of the illustrations, each bearing the name of a poem.

In addition to these priceless works of art, there are marvelous tapestries, inlaid work, jewels, paintings and a splendid silver canopy of Spanish make, that is worth half a million dollars. Yes, and there are other art treasures too numerous to be mentioned in a brief article; but the collection is not for the frivolous. To Mr. Benguiat it is as sacred as the altar in the holy temple.

A Nerve Tonic.—As a nerve calnative, in neurasthenia and similar diseases, Daniel's Cont. Tinct. *Passiflora Incarnata* has no competitor. For nervousness during the menopause, it always gives entire satisfaction. A mother recently who had lost her first child, had in appearance almost become a physical wreck. Her face was drawn, indicating the grief she had suffered; her appetite was gone and she had reached an acute state of nervousness, being startled at the slightest sound. She was given Daniel's Cont. Tinct. *Passiflora Incarnata* in small doses to secure rest and sleep. This treatment was continued for a week, producing the desired sedative effect. She has regained her vigor and appetite and said she feels that the cure is complete.

Dermapurine in Skin Diseases.—Pueblo, Col., Dec. 20, 1900, Derma Remedy Co., St. Louis, Mo. Gentlemen:—Some months ago you sent me a bottle of Dermapurine and a cake of Dermapurine Soap. I used the samples in a case of psoriasis and in a case of dandruff with great success. I consider Dermapurine a fine remedy. I am, truly yours, C. B. Cahusac, M.D.

Celerina and Aletris Cordial (Rio) in Amenorrhea.—Celerina and aletris cordial rio, equal parts, teaspoonful every four hours, is a most efficient remedy for amenorrhea.

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ORIGINAL COMMUNICATIONS.

A GLANCE AT THE HISTORY OF CEREBRAL LOCALIZATION WITH SOME CONSIDERATIONS REGARDING THE SUBDIVISIONS OF THE AREAS OF REPRESENTATION OF CUTANEOUS AND MUSCULAR SENSIBILITY AND OF CONCRETE CONCEPTS.*

BY CHARLES K. MILLS, M.D., PHILADELPHIA, PA.

The initiation of the modern era in cerebral localization should be attributed to two men of notably different characteristics, Francis Joseph Gall and Sir Charles Bell. Some might be inclined to dispute this assertion in so far as it relates to Gall, forgetting that he, in spite of his misconceptions and vagaries, first fixed the attention of the world upon the great idea of the plurality of mental functions or faculties and their localization in separate centers in the brain. Gall, born in a town in Baden in 1758, after studying medicine at Strassburg settled in Vienna in 1781, and about 1796 or 1797 first announced his views with regard to the subdivision of the brain into organs. His chief work on the anatomy and physiology of the nervous system was published in parts between 1808 and 1820. His contributions to our present knowledge of exact localization were not large, although he indicated, with data drawn from clinicopathology as well as from his supposed correlation of the faculty of language to a portion of the skull, the position for the speech center, later fixed with more scientific precision by Broca. In another paper I shall refer

*Abstract of the paper read before Philadelphia County Medical Society, May 25, 1904.

more specifically to Gall's work on the localization of the function of speech.*

Sir Charles Bell, in 1811, made the great discovery of the subdivision of the spinal nerve roots into an anterior or motor and a posterior or sensory set. This was the first step in the experimental and clinicopathologic study of localization. All that is now known of the subject is the inevitable outcome of this discovery. To appreciate the enormous advances which have been made in our knowledge of cerebrospinal localization since the time of Bell, it is only necessary to compare Bell's well-known diagram of the subdivision of the spinal nerve roots, reprinted in so many of the works on anatomy and physiology during the last century, with some of the recent schemes showing the entering and emerging spinal paths and the subdivisions of a transection of the cord into its columns and areas, and their neuronal constituents.

Before the time of Gall and Bell, views regarding the localization of faculties in the brain were always hazy and sometimes extraordinary. The general tendency of the ancients, and of the writers and teachers up to a comparatively modern period, was to give to the spaces of the brain, to its chambers and corridors, first importance in the localization of its functions or controlling agencies. This was largely due to prevailing metaphysical and teleologic views. Hippocrates placed the seat of the mind in the left ventricle. Erasistratus believed that air, after undergoing elaboration in the lungs and heart, was converted in the ventricles of the brain into animal spirits which pervaded and controlled the body; and Servetus, in the sixteenth century, taught that the choroid plexus secreted the animal spirits, that the fourth ventricle was the seat of memory, and that the soul dwelt in the Sylvian aqueduct. When the philosophers began to assign the seat of mental or spiritual

*The present paper is one of several recently prepared or in course of preparation by the writer, being designed to sketch the development of our knowledge of the subject of cerebral localization and to give its recent status, presenting at the same time the writer's views and his contributions to the subject. The first of these papers, read at the Conference in Neurology and Psychiatry, held at the Sheppard and Enoch Pratt Hospital, Towson, Md., May 9, 1904, and in part before the Kings County Medical Society, Brooklyn, N. Y., April 19, 1904, was published in the *Univ. of Pa. Med. Bull.*, May, 1904. In this paper were given for the first time two schemes of the physiologic areas and centers of the human hemisphere which place the motor area cephalad of the central fissure and in other important particulars indicated new subdivisions of the cerebral cortex and new locations of centers. In a third paper read before the College of Physicians of Philadelphia, June 1, 1904, and published in the *Transactions of the College*, 1904, aphasia and the cerebral zone of speech are considered.

attributes to the solid portions of the brain, they still showed their transcendental tendencies, as when Descartes in the seventeenth century assigned the soul to the pineal gland. Bruno in the sixteenth century taught that the soul had its seat wherever there was a sensation. Up to a comparatively recent period, from which we have not entirely escaped, the brain has been regarded by many as a single organ, one which acts as a whole; also until a period which only briefly antedated the discoveries of Fritsch and Hitzig and of Ferrier, the microcosm theory of cerebral function, the doctrine that in each part of the brain resided the functions of the entire mass, largely prevailed.

Notwithstanding the generally prevailing views adverse to the idea of brain localizations, long before the time of Gall the view that the brain was the organ of many faculties or functions had been promulgated, although in a crude way. One of these views was that the cerebrum was the organ of perception or attention and the cerebellum that of memory. St. Gregory of Nice compared the brain to a city in which the going and coming of the inhabitants caused no confusion. A sketch of the head made by Albert the Great in the thirteenth century shows five circles placed over three portions of the head indicated as *anterior pars cerebri*, *media pars* and *posterior pars*. Various faculties or qualities are placed in these circles. In the centuries succeeding the thirteenth the subject was treated by a number of authors, and one of these published an engraving in which from a line about midway between the orbits and hairline, backwards, seven spaces are indicated by names supposed to designate the faculties beneath them. These names and their locations are, *sensus commun*, *fantasia*, *imagina*, *vermis*, *cogitativa*, *estimativa* and *memorativa*.

Omitting a discussion of the centers of speech and the cerebral zone of language, except in so far as such consideration is necessary to our general subject, I shall now glance at the development of localization views since the discoveries of Fritsch and Hitzig and of Ferrier between 1870 and 1875. The status of the subject, at least as taught generally in Great Britain and in America, is well represented in the diagram of Ferrier, showing the probable position of the centers of the human brain from homologies with the brain of the monkey

on which his experiments were chiefly made. The reader is referred to my recent paper in the *Univ. Pa. Med. Bull.*, May, 1904, for a sketch of the progress of our knowledge of localization from about 1875 to the present time. This has been chiefly in the following directions: (1) in the more exact limitation, location and subdivision of the great motor area; (2) in an increase in the number of centers concerned with the function of speech and correlated processes; (3) in additions to our knowledge of the localization of areas of representation for cutaneous and muscular sensibility and stereognostic perception; (4) in a more exact and elaborate knowledge of visual and auditory localization; (5) in a more comprehensive grouping of brain centers into general areas, this being the outcome especially of the work of Flechsig; and (6) in additions to our knowledge of the subdivisions of the great concrete concept area or posterior association region of Flechsig. The two diagrammatic schemes of the writer represent fairly well what he regards as the present status of the entire subject.

It is probable that the areas of representation of cutaneous and muscular sensibility are subdivided in a manner analogous to the subdivision of the motor area; in other words, for the face, head, neck, upper extremity, trunk, lower extremity and other parts of the body, and that even some of these areas contain subareas and centers. As indicated diagrammatically, the cutaneomusculosensory area encircles on all sides the great motor area, on the lateral aspect of the hemispheres, occupying the postcentral convolution and the anterior extremities of the superior and inferior parietal gyri or lobules, and on the mesal aspect the more posterior and inferior portions of the paracentral and frontomarginal gyri, and the contiguous parts of the precuneus and gyrus fornicatus. The sensory areas for the face, head, neck, upper extremity, trunk, lower extremity, etc., occupy respectively areas adjoining the subdivisions of the motor cortex representing these parts of the body; in other words, that the areas and subareas of representation of the movements of the larynx, jaws and face should be toward the lowermost portion of the postcentral and postparietal convolutions, the areas for the head and neck, upper extremity, and trunk coming next in order from below upward, while on the lateral edge of the hemisphere and on its mesal aspect are cen-

ters for the lower extremity, anus, genitalia and viscera. Clinicopathologic, experimental and psychologic facts can be adduced in support of these localizations. Studies in hypnosis and in hysteria and of the sensory aura of Jacksonian epilepsy point in the same direction. A considerable number of cases of limited cortical or of subcortical lesion have been recorded, in which the anesthesia has been circumscribed to a limb or the face or trunk, or to special portions of these larger divisions of the body. The well-known experiments of Horsley and Schafer also showed that circumscribed areas of anesthesia sometimes resulted from experimental lesions of the limbic lobe. Grünbaum and Sherrington, in their experiments on the higher anthropoids, demonstrated that certain segments of the nonexcitable postcentral convolutions were distinctly related to particular subdivisions of the precentral motor cortex. Faradization of portions of the cortex of the postcentral convolution, while not calling out motor response, facilitated this response in portions of the precentral convolution at the same horizontal level. This is a fact pregnant with suggestion.

Numerous facts supporting the subdivisions of the cutaneous-musculosensory area into a mosaic of centers will be presented in another contribution. It cannot be considered as fully established that the area of cutaneous representation is more cephalad than that of muscular representation on the lateral aspect of the hemicerebrum, and more superior on the mesal aspect as indicated in my diagrammatic scheme. Some facts would seem to bear out this suggestion, and others, especially the experiments on the gyrus fornicatus, the converse proposition, namely, that muscular sensibility is represented next to the motor cortex and cutaneous sensibility more caudad and more ventrad.

The centers contained in the zone of speech will be considered in a paper to be read before the College of Physicians, June 1, 1904, and the areas of representation of the muscular sense and of stereognostic perception have already been discussed by me somewhat fully in previous papers.* I shall in the rest of this paper confine myself to a brief consideration of several of the

*The Separate Localization in the Cortex and Subcortex of the Cerebrum of the Representation of Movements and of Muscular and Cutaneous Sensibility, *Jour. Nervous and Mental Disease*, November, 1901.

A New Scheme of the Zones and Centers of the Human Cerebrum, *Jour. Amer. Med. Ass.*, October 4, 1902.

subareas or centers of the great concrete concept area or zone, namely, those for object seeing, for orientation and for intonation. I shall also briefly discuss the question of the cortical representation of color recognition.

Under such designations as mind blindness, soul blindness, object blindness and visual pragmatagnosia (Wyllie) is described a condition in which the individual, because of a cerebral lesion or disease, is unable to recognize by sight once familiar objects. Old visual memories of the kind required for recognition of particular objects are no longer recalled. I shall not enter into any discussion of the refinements of this interesting subject, as this is foreign to my present purpose. In a note to my recent article in the *University of Pennsylvania Medical Bulletin*, May, 1904, on the physiologic areas and centers of the cerebral cortex of man, I indicated my belief that the cerebral area for object seeing was a large one and probably subdivided, especially in highly civilized man, into several subareas or centers of representation such as those for geometric and architectonic forms and for persons, places and natural objects. Very few cases of object blindness with necropsy have been recorded.

In order that object blindness shall be complete, the recorded cases would seem to show that it is necessary for lesions to be present in somewhat corresponding locations in both hemispheres. Transient or recurring object blindness is sometimes exhibited by patients with a lesion confined to one hemisphere. Two cases of this kind have fallen under my observation. In both of these cases operation was performed for the removal of a brain lesion, presumed to be tumor, although in one case at least the result did not confirm this opinion. In this case the patient presented in the right half of the body disorders of sensation, stereognosis and coördination. He was partially word deaf, word blind and letter blind, and late in the case showed marked right hemiparesis. The operation was performed with the view of exposing the brain at the posterior extremity of the first temporal convolution. A large patch of necrotic tissue, having somewhat the shape of a pyramid with its base toward the occipital pole of the brain, was uncovered. The lesion may have extended farther than was revealed by the operation. It not improbably included the caudal extremities of the first and

second temporal convolutions, and possibly more. The operation was performed four years prior to the writing of this paper, and the patient is still living and in fair health, but is hemiplegic, partially hemianesthetic and aphasic. He suffers at times from curious attacks which can properly be described as periods of mind blindness or object blindness.

Liepmann has recently reported the only practically uncomplicated case of soul blindness which has been so far reported, although the cases of Serieux and of Lissauer are of value notwithstanding the complication of object blindness with other symptoms like word blindness. The case of Liepmann was first recorded clinically in 1902.* The patient, a music teacher, aged 50 years, had an apoplectic attack September, 1901. After this he did everything in a reverse or foolish manner, as, for instance, he washed in his soup. He did not recognize large objects, nor his own reflection in the mirror, but recognized persons by the voice. He did not know his own wife by sight; color perception was much disturbed. A similar defect was present in the right upper quadrant of the visual field; vision was two-thirds. He could imitate large movements fairly well. Well-known objects were often wrongly named. Recognition through touch was slightly disturbed, but through hearing was normal. Motor aphasia was absent, as was also sensory aphasia, unless his wrongly naming objects might be so considered. This patient died in 1904, two years after the case was first recorded by Liepmann. A necropsy was obtained with most interesting results, showing the existence of lesions on both sides of the brain, on the left in the lower occipital convolutions and on the right in the angular and second occipital convolutions.† At the base of the left occipital lobe, says the record, was a deep cavity which indicated an area of softening involving the fusiform and lingual convolutions. In the right hemisphere the area of softening was on the convexity and extended from the angular gyrus through the gray and white matter of the second occipital convolution.

[After presenting two other cases of less uncomplicated mind blindness reported by Serieux and by Lassauer, the speaker discussed the subject of the cortical representation of color

**Allgm. Ztschr. f. Psychiat.*, Bd. 59, p. 952, 1902.

†Liepmann, A. J. *Allgm. Ztschr. f. Psychiat.*, Bd. 61, Heft 3, p. 424, 1904.

recognition, of intonation and of orientation. Cases of Brill, of Verrey and of others of loss or impairment of the achromatic sense referable to lesions circumscribed to the occipital lobe were given, and the centers of half retinal and of central retinal representation of colors and also of form and of luminosity were tentatively indicated. The representation of intonation was placed in the anterior extremity of the temporal lobe, with supporting cases, and that of orientation in the posterotemporal region anterior to the areas for object seeing. Attention was directed to the fact that the localization of centers in the concrete concept area will be determined by two classes of studies: (1) by the correlation of circumscribed pathologic findings with particular symptom-complexes, as, for instance, with different forms of object blindness and object deafness, and (2) by the correlation of fissural and gyral characteristics in particular regions of the brain with mental acquirements of a high and special order on the one hand, or with the absence or relative absence of such capacity on the other hand. Reference was made to the early work of the speaker on racial and on arrested and aberrant brains; to the studies of Professor Burt G. Wilder on brains of high type, and particularly to the investigations of Dr. Edward Anthony Spitzka, of the brains of educated and distinguished men. Diagrams were used to illustrate all points presented. After this presentation the following series of practical conclusions was drawn.]

In conclusion I would like to direct attention to the strictly practical applications of the large subject in hand, and especially in the direction of surgery. During the last five or six years brain surgery, guided by localization, has had a renaissance, and the percentage of successful results in operations for localized hemorrhages, abscesses, and especially tumors, is gradually but surely improving. This improvement is due (1) to a more thorough knowledge of cerebral localization; (2) to more exact methods of mapping out the site, size and direction of operations; and (3) to improvement in surgical technique. As regards surgery, I can only take time to direct attention to a few of the valuable results of recent studies in localization.

(1) In operating for prefrontal tumors higher psychical symptoms should be the chief guide, and, in the case of the left hemisphere, agraphia and aphasia, the opening in such cases

always being anterior to the main extent of the motor region.

(2) In all operations for brain tumors with dominating motor symptoms, the opening of the skull should be made so that the correlative brain exposure will be three-fourths in front and one-fourth behind the central fissure, the base of the flap being perpendicular to the lower end of that fissure.

(3) In operations for tumors having symptom-complexes in which disorders of the muscular sense and astereognosis are dominant, the opening in the skull should be so made that the cerebral exposure will be three-fourths behind and one-fourth in front of the central fissure.

(4) When oculomotor symptoms, such as abducens paresis, lid drooping and nystagmoid movements are present with symptoms pointing to the parietal lobe, the operation should be parietal or parietooccipital, it being recognized that the interference with eye movements is not basal, but probably due to disturbance of the visual motor cortex.

(5) When object blindness in any of its forms is the central feature of the symptomatology, operation should be done with a view of exposing the lower temporooccipital convolutions.

(6) When relative or absolute hemianopsia or hemiachromatopsia or both are the most important symptoms, the operation should be with the view if possible of reaching the mesotentorial surfaces of the occipital lobe.

(7) When forms of literal or verbal blindness are the central features of the syndrome, the angular gyrus should be the focus of the exposure.

(8) Similarly, when verbal deafness is the deciding symptom the posterior extremities of the first and second temporal convolutions should be the objective points, while for uncomplicated verbal amnesia the midtemporal region should be exposed, and for note deafness or amnesia, the anterior temporal region.

RESPIRATORY TRACT—AFFECTIONS, SYMPTOMS AND TREATMENT.

BY DR. ARTHUR B. SMITH, SPRINGFIELD, O.

The average physician is frequently vexed in finding a condition which resists his best efforts to bring about a cure. This holds good in almost every disease at some time or other, but particularly in affections of the respiratory tract, where there may be a great variety of symptoms in several cases of the same disease.

Almost every physician has some favorite prescription for coughs, bronchitis, laryngitis, etc., which he uses until suddenly it seems to lose its efficacy—why, no one knows. Then another remedy takes its place until it, too, fails to give the desired result. It is rarely that one finds a cough remedy which will be consistently good in the majority of cases. Theoretically there appears to be a well-founded objection to the use of cough syrups in general, but nevertheless there are times when nothing else gives satisfaction; therefore, the physician pins his faith to that remedy from which he and his patients derive the most good. It is not always easy to find such a remedy, but when it is once found, it is equally difficult to dispense with, and often the physician is almost compelled to resort to a routine treatment. In such cases, of course, he wants the best.

There are constantly being placed on the market new formulas for affections of the air passages. Some of these formulas are of unbounded benefit in some cases, but usually it will be found that the results are far from satisfactory. Many of them cannot be taken when there is any gastric complication, as is sometimes the case, because of consequent nausea and vomiting. Others seem almost invariably to act as cardiac depressants and are highly objectionable for that reason. With the advent of heroin, however, these disagreeable features have, to a great extent, been avoided. Heroin, in the vast majority of cases, can be tolerated by even the most sensitive stomach, and, if any disturbance should occur, it can easily be obviated by decreasing the dosage and then gradually resuming the previous amount. Heroin can be prescribed in cases which are complicated by an enfeebled heart, without danger of depressing effects. As compared with codeine, its sedative action on

the respiration is much more powerful. The fatal dose of heroin is said to be one hundred times the efficacious dose, while with codeine the efficacious dose is one-tenth of the fatal dose. In other words, heroin is ten times safer than codeine, and can be given in much larger doses, if necessary, without danger. It appears to exert a specific action on the center of respiration without causing disturbances of any other organs or centers, and there is no danger of acquiring any habit by its use.

In phthisical patients the well known lack of appetite and intolerance of various foods render it imperative to give remedies which will not in any way interfere with the digestive functions, while at the same time controlling or alleviating the cough and other distressing conditions.

Some time ago my attention was called to a preparation composed of a solution of heroin in glycerine, combined with expectorants, called glyco-heroin (Smith). Each teaspoonful of this preparation contains one-sixteenth grain of heroin by accurate dosage. It is of agreeable flavor, therefore easy to administer to children, for whom the dose can be easily reduced with any liquid, or by actual measurement. It possesses many advantages not shown by any other preparation I have used, and has none of their disagreeable features.

In citing some of the cases treated with this remedy I shall not go into a minute description of any case, but briefly state the conditions which existed and the results obtained, which were uniformly good.

CASE 1. S. B., aged 16. Caught a severe cold while traveling. This developed into an unusually severe attack of bronchitis with mucous rales, pain, cough and some slight fever. Prescribed glyco-heroin (Smith) one teaspoonful every two hours, decreased to every three hours. After a few doses were taken there was a decided improvement, the respirations were slower and deeper, the expectoration freer and the temperature normal. In a few days the patient was practically well and able to return to school. No medicine except glyco-heroin (Smith) was given and the results from its use were excellent.

CASE 2. W. L., aged 31. Acute bronchitis. Painful cough, with difficult expectoration, particularly when in a reclining posture. Glyco-heroin (Smith) in teaspoonful doses

every three hours gave speedy relief and a cure was effected in a few days.

CASE 3. S. W., aged 60. Chronic bronchitis. Had coughed for years, with expectoration of a thick, yellow, purulent and very offensive matter. Had lost flesh gradually until about twenty pounds below usual weight. No appetite, very constipated, pains all over chest, night sweats and insomnia. Patient on the verge of nervous prostration and greatly weakened. She was given bromides, a tonic, and glyco-heroin (Smith), the latter in the usual dose at intervals of two hours. The first few doses were not well borne, as they seemed to cause some nausea, but by giving a smaller dose and then gradually increasing it, tolerance was soon obtained, and the results were remarkable. The cough and expectoration greatly decreased, the appetite improved and the patient became much better in every way. The treatment was continued as before, except that the glyco-heroin (Smith) was given every three hours. In three weeks the patient was eating almost everything she pleased, and sleeping well. The night sweats had stopped, together with the cough, and, as the patient expressed it, she "felt like another woman." At present she is in perfect health and needs no medicine except an occasional laxative.

CASE 4. B. E., aged 26. Severe bronchitis accompanying an attack of influenza. Various remedies were tried in this case, with negative results, until glyco-heroin (Smith) was given in teaspoonful doses every three hours. In a short time decided relief was obtained and the cough stopped permanently.

CASE 5. R. L., aged 6. Capillary bronchitis with pains over chest, cough and difficult expectoration. Glyco-heroin (Smith) administered, 15 drops every 3 hours. After taking a few doses the condition was much improved, and a speedy return to perfect health followed.

CASE 6. W. H., aged 5. Whooping cough. Spasmodic paroxysms of coughing, sometimes being so severe as to cause vomiting. Tenacious mucous was present, requiring great expulsive effort to loosen it. There was little fever, but the patient was much prostrated and weakened by the cough. Glyco-heroin (Smith) was given in 10 drop doses every two

hours with good results. This was combined with hygienic treatment, the patient being given as much fresh air as possible. In a few days the condition was much ameliorated, the cough under fair control, expectoration was freer and easier to raise, and convalescence uneventful. The case was discharged cured and there were no unpleasant sequelæ, the patient at present being in perfect health.

**A NOTE ON BROWN-SEQUARD'S PARALYSIS, WITH
REPORT OF A CASE IN WHICH THE PARALYSIS
FOLLOWED A GUNSHOT WOUND
IN THE NECK.***

BY ALFRED GORDON, M.D., PHILADELPHIA, PA.

The symptom-group obtained from a hemisection of the spinal cord has been known from the time of Galen; but Brown-Séguard, particularly in his classical description based upon clinical observations and numerous experiments, has given us an exact picture of the sensory and motor disturbances in mammifera; he has also shown that in man traumatic or other lesions which produce a breach of continuity of one-half of the cord produce identical disturbances. In 1846, while experimenting on animals, like the dog, the rabbit and the guinea-pig, he noticed that a hemisection of the cord leads to the following symptoms limited to the portion of the body which is innervated by the segment below the level of the section: (1) A motor paralysis of the side of the lesion; (2) an anesthesia of the opposite side of the body. In addition to these main symptoms he observed also a few minor symptoms, viz.: (1) A hyperesthesia of the paralyzed side; (2) a small band of anesthesia situated immediately above the hyperesthetic area; (3) also sometimes a narrow area of hyperesthesia immediately above the anesthetic band. Conjointly with the hyperesthesia there is also (4) a distinct loss of muscular sense which is not present on the opposite side of the body; (5) exaggeration of tendon reflexes on the paralyzed side or even on both sides; (6) a vasomotor paralysis on the paralyzed side, which is shown by

*Read before the Philadelphia County Medical Society. June 22, 1904.

an increase of the temperature as compared with the opposite side; (7) finally visceral symptoms (incontinence of urine and feces); the latter depends upon the segment involved. When the cervical cord is injured, other symptoms will be observed in addition to those mentioned, namely: disturbance of respiration, dilation of the pupil on the side of the lesion, also enophthalmos (paralysis of the sympathetic nerve). The classical symptomatology which was observed on animals can also be observed in man, when the continuity of one-half of the cord is interrupted either by a tumor or syringomyelia, or by a localized focus of myelitis or hemorrhage (hematomyelia), by pressure from another source, or finally and most frequently by a traumatic injury. The patient I have before you presents Brown-Séquard's syndrome, which made its appearance subsequent to a traumatic injury of the spinal cord. His history as taken at the Jefferson Hospital is as follows:

On the twenty-ninth day of December, 1903, patient was shot in the neck, the bullet penetrating the right side, posterior to the sternomastoid muscle in its middle third. There was no loss of consciousness. Patient was removed to the Hahnemann Hospital directly after the accident, and two days thereafter was operated on for the removal of the bullet. Through the courtesy of that institution (3-26-04) the following facts were elicited from notes taken at the time the patient was under their care. Diagnosis: Gunshot fracture of the fifth cervical vertebra (Dr. Van Lennep). History of the illness: On Wednesday, December 30, 1903, at 2 A. M., patient was brought to the hospital with a wound in the region of the right side of neck close to the region of the jugular vein. The left pupil was larger than the right, but both reacted. The right lower extremity he could not move, and later the right upper extremity was also involved. The bullet wound was explored, but no trace was found. An incision was made over the cervical spines, the fifth cervical spine being found readily movable. The vertebral arch was pulled away with forceps, as well as the transverse process on the right side. The tract of the bullet was found to extend downward, entering the posterior mediastinum. The patient made a good recovery after the operation. Was discharged February 13, 1904.

At present he presents a scar, surrounded by powder-marks

over the region of the middle third of the sternomastoid muscle on the right side, and also a scar about 4 inches in length directly over the ligamentum nuchæ. Patient states that his right arm and leg were paralyzed. The leg began to improve on the twenty-fifth day after he was shot, so that now he is able to walk, although some dragging is noticed in walking. There is still some impairment in power of various portions of the affected limb. There is some foot-drop, the knee-jerks are markedly exaggerated, ankle clonus and Babinski are distinct. No marked spasticity, however, is noticed. The right upper extremity is practically useless. About two months ago patient noticed returning motion in the little finger, which has improved, and he is now able to move the other fingers as well to flex and extend the right hand at the wrist. The paralysis is flaccid, although there is some resistance to passive movement at the elbow. All the muscles of the upper extremity are somewhat wasted, but the atrophy affects particularly the supra and infraspinatus, the pectorales and the trapezius muscles. All the tendon reflexes are exaggerated. On the opposite side of the body there is no indication of impairment of the motor power. The knee-jerk, however, is somewhat exaggerated, and there is a doubtful Babinski. Examination for sensations reveals the following peculiarities: While the sense of touch is preserved, the temperature and pain sense are very much impaired. The left upper extremity, beginning on all its aspects at a level of 14 cm. below the acromion, the thorax below the mamillary line and the abdomen on the left, finally the entire left lower extremity on all its aspects, are totally thermoanesthetic and analgesic. Above the mamillary line to the clavicle, also partly on the left side of the face, there is some diminution of sensations of pain and temperature. Over the deltoid muscle there is a slight hyperesthesia, and immediately below a small area of hypalgesia. The disturbance of sensations is strictly and mathematically limited to the middle line of the body. The right half of the body is absolutely normal to all forms of sensation. The only sensory disturbance to notice on the right side is the astereognosis of the hand. The pupils are unequal, left larger than the right; slight drooping of the right eyelid; and slight enophthalmos is present on the right.

To sum up, we have here a motor paralysis on the right side and a sensory paralysis on the left side. This is a symptom-group which we observe in experimental physiology, when a hemisection of the spinal cord is made on animals. It is true that in the latter case we have a few additional symptoms, namely a slight band of anesthesia on the paralyzed side, a vasomotor paralysis of the same side, visceral disturbances; but these symptoms are not always present in man during life. Nevertheless the fundamental symptoms concerning the localization of motor and sensory disturbances are present here in their entirety. It is therefore a case of typical Brown-Séguard's paralysis. A number of cases reported as examples of Brown-Séguard's paralysis do not all present the typical symptoms as they were observed experimentally in animals: in some of them the paralysis is only partial, in some the sensory disturbances of the opposite side are not clearly cut. In fact the pure type of this group of symptoms is rarely met with. In my case the main symptoms are present in their entirety and in the perfectly typical form, so that from a physiological standpoint it can be considered as one of exceptional value.

The morbid manifestations in traumatic hemisections of the spinal cord are limited to the lower extremities when the injury is below the ninth thoracic vertebra. In injuries at the level of the upper and middle thoracic vertebræ the thorax is also partly involved. An entire half of the body will show sensory and motor disturbances when the lesion is above the sixth cervical vertebra; in such cases there may also be present symptoms of paralysis of the sympathetic system. As in a large majority of cases the injury occurs in the thoracic region, the disturbances are usually confined to the lower extremities. My case, therefore, can be placed among those that are rarely met with. There are two points in the history of my patient's condition which deserve our attention.

An injury to the spinal cord is usually considered, with very good reason, of a very serious import because of the permanence of the lesions of the central nervous system; and in cases in which we suspect a hemisection we are naturally inclined to give the gravest prognosis. From a medicolegal standpoint it is highly important to be able to appreciate properly the true condition of the victim of an assault. It will be an error

to think that when paralysis follows a hemisection of the cord, the patient will remain permanently incapacitated. The truth is that in a large majority of cases great improvement and even functional recovery follow. The reason of it lies in the question of regeneration of nervous elements, which in the state of our present knowledge is accepted as proven.

Clinical experience shows that in lesions below the sixth cervical vertebra the patient has great chances for improvement, while in cases above that level the prognosis should be reserved because of a possible appearance of disturbance of respiration. Our case is interesting from this point of view, that the injury affected the cervical cord at the level of the fifth vertebra, and the patient escaped immediate serious trouble and even great improvement followed in the lower extremity.

It may perhaps be of some interest to see if our present knowledge of the fine anatomy of various tracts will explain the curious combination of symptoms. As to the motor paralysis in our case, it is easy to understand. A section or a lesion produced in the right half of the cord by the bullet injured the pyramidal tract below the decussation, as the injury was at the level of the fifth vertebra. The very same condition will explain the various reflex phenomena mentioned above (exaggerated reflexes, Babinski, ankle clonus). Far more difficulty we experience in explaining the crossed hemianesthesia. In order that a lesion of one side of the cord should give an involvement of sensations on the opposite side, we must suppose that either of the sensory fibers themselves cross each other all along the cord or their collaterals decussate. Anatomy teaches us that the cells of the spinal ganglia send sensory prolongations which bifurcate: one branch is distributed at the periphery in the skin; the other branch serves to form the posterior root and enters the cord. The latter divides in the cord into two branches: one ascending (long), the other descending (short). These two do not decussate in the cord. The sensory impressions which come from the periphery are transmitted through these longitudinal branches, and also through the collaterals which those fibers give up. It is principally Ramon y Cajal who has made us familiar with those collateral fibers. Among the latter there is particularly one variety that concerns us in the case under consideration,

namely, the collaterals of the posterior commissure ; after they have crossed the median line, they become distributed in the posterior cornua of the opposite side. The paths for sensations of pain and temperature are fibers coming from the posterior cornua of the opposite side. It is, therefore, evident that a destruction of one-half of the cord will unavoidably produce a sensory disturbance on the opposite side. I hasten, however, to add that so simple as the question of sensory distribution may appear, it is far from being solved, as the anatomical data are not yet in entire accord with the clinical and experimental facts. In our case the pain and temperature sense are mainly involved. The lesion can, therefore, be approximately, but with a great degree of probability, placed in the right side of the cord affecting the pyramidal tract and the posterior cornu on the same side.

Foreign Bodies in the Heart.—A remarkable demonstration of the tolerance of the heart for foreign bodies was recently afforded in the Parish hospitals, the "subject" being a young man who had attempted suicide by means of a pistol. The bullet penetrated the thorax, and on admission to the hospital the patient was in a state of profound collapse with symptoms of effusion into the pericardium. This ultimately underwent absorption, and there remained only some abnormal sounds, the precise origin of which could not be determined. He was allowed to go home, but forthwith developed grave symptoms of cardiac irritation, which brought him back to the hospital, where the thorax was skiagraphed and the bullet seen to be lying loose in the ventricle. After consultation, it was decided that the patient's only chance was to remain in the recumbent position until the projectile had become encysted, a process which required several months. He was recently discharged, apparently in good health, and since leaving the hospital he has resumed his usual avocation without giving rise to any further symptom of cardiac trouble. The interest of the case lies, of course, in the prognosis, and unfortunately data are wanting upon which to base a trustworthy forecast, but we may hope that the patient will be kept under observation in order that this unusually interesting observation may be completed in respect of the subsequent history.—*Medical Press and Circular.*

SOCIETY PROCEEDINGS.

NEW YORK NEUROLOGICAL SOCIETY.

Joseph Collins, M. D., President.

REPORT OF A CASE OF SPINAL CORD TUMOR OPERATED UPON.

Dr. I. Abrahamson reported this case. The patient was a man of sixty in whom the first symptoms had developed in February, 1900. The first symptom complained of was a coldness and numbness in the fourth and fifth toes of the left foot at night. Later, the right foot and leg were similarly affected. On March 15, 1902, he first came under the speaker's observation. On admission to the Montefiore Home, May 12, 1902, there were weakness and atrophy, most marked on the right side. The extremities were flaccid, with some tendency to contracture and a reaction of degeneration. The thighs were flexed, adducted and inwardly rotated. The knee jerks were lively. There was total loss of voluntary power in both lower extremities. There was a point of hyperesthesia in the right supraspinatus region. There was much diversity of opinion as to whether it was extramedullary or intramedullary. His own diagnosis was a tumor of the spinal cord at the level of about the sixth dorsal vertebra, and this was confirmed at the operation. Unfortunately, secondary infection occurred, and the patient died as a result of this three weeks after the operation.

Dr. M. Allen Starr said that in his paper, read before this society in 1895, he had collected from autopsy records 123 cases of spinal cord tumor. Out of this number there were 100 with sufficiently accurate records to allow of the statement that in 75 per cent. of the cases surgical interference should prove successful. Since that time Bruns had published an excellent article, and Schlesinger still more recently had published a paper containing 400 cases of spinal cord tumor. Of this large number there were apparently about 60 per cent. which were operable. Schlesinger's statistics showed that over one-fourth of these cases were sarcomata, whereas in his own paper most of the cases seemed to be sarcoma or fibroma. Of Schlesinger's cases 64 were tuberculous, 44 were cysts, 33 were fibromata, 28 were gummata and 20 were gliomata. The speaker said he had seen 101 brain tumors and 10 spinal cord tumors.

Of his 10 cases of spinal cord tumor, only 6 had been operated upon. Two of the remainder were gummata with distinct Brown Sequard symptoms, and subsided gradually under anti-specific treatment. The other two had not been operated upon because the diagnosis had not been made early enough and with sufficient accuracy, and the autopsies showed in both that the operation would have been unsuccessful. Of the 6 patients operated upon, all died; 2 of meningitis, 2 of bed-sores and 2 of collapse. Dr. Pearce Bailey was, therefore, to be congratulated on the great success attained in the case he had presented to the society this evening. He would insist upon the absolute necessity of early diagnosis and early operation, a statement which had been fully borne out by the published experience of Dr. McCosh. Although Dr. Collins had called attention to the unreliability of pain as a symptom, it should be noted that in 5 out of the 6 cases reported here this evening pain had been a rather prominent feature. Moreover in Schlesinger's cases pain was a prominent symptom. He did not see just how the differential diagnosis from meningomyelitis could be made unless pain were present. Schlesinger had also called attention to priapism as one of the common symptoms indicative of spinal cord irritation.

Dr. B. Sachs said that a number of years ago he had expressed himself as being in favor of early interference in these cases of spinal cord tumors, and this further experience had only strengthened this opinion. Reference was made to two of his cases, one operated upon two years, and the other three years ago, both of which were doing well. He would, therefore, insist that operative interference should be urged just as soon as the diagnosis had been made. He agreed with Dr. Collins that too much prominence had been given to the question of localization of spinal cord tumors. An important and significant fact in the history of these cases was that the affection remained unilateral for a very considerable time, and when it became bilateral the symptoms of affection of both sides quickly became apparent. In those cases in which the symptoms were either sensory or motor root symptoms, and in which all of the severer spinal cord symptoms remain in abeyance for a long time, it was probable that the neoplasm was extradural. A rather sudden development of general

myelitic symptoms following upon symptoms which had been unilateral for a considerable time, pointed very strongly to spinal cord tumor.

Dr. Walton, of Boston, said that Dr. Collins' statistics and their discussion emphasized the large proportion of operable spinal tumors and the large percentage of benefit from operation upon such tumors. Such considerations should prevent us from erring on the conservative side when the diagnosis of tumor has been established. It was to be hoped that when we formed the habit of including this possibility in every case of eliminative diagnosis, tumors would be more frequently recognized at an early stage, when operation promised the most. That this habit was not established fifteen years ago was illustrated by a case at that time under his care, which was seen by so distinguished authorities as Charcot and Seguin, neither of whom suggested the possibility of tumor, both regarding the case as one of myelitis, and recommending such treatment as the cautery, ergot and strychnine. In 1892 Dr. Putnam, under whose care the patient had come, recognized the lesion as a tumor, and the case had been twice operated upon, once by Dr. Keene and once by Dr. Warren, with beneficial results though not cure. That pain was by no means an essential symptom even when the posterior nerve roots had become involved in new growth, was illustrated by this specimen of intradural carcinoma, which had completely destroyed the posterior nerve roots of one side in the cervical region. The case would shortly be published by Drs. Taylor and Waterman. There was no history of pain during the onset of this lesion. The clinical history closely resembled that of the case reported to-night by Dr. Abrahamson, i. e., atrophic paralysis of the upper with spastic condition of the lower extremity. Dr. Collins had alluded to the fact that fibromata might cause more pain than tumors of this class, a fact illustrated by the case Dr. Putnam had reported, in which Dr. Warren removed a fibroma lying free within the dura, a longitudinal section of which, from the laboratory of Dr. Taylor, was shown. In this case violent pain, specially including abdominal pain, was the prominent feature. In the microscopical specimens exhibited this evening was included a case of cysticercus in the substance of the cervical spinal cord in a

case of tabes. He had happened upon this while working with Strümpell in 1880. There were no symptoms referable to the cysticercus.

Dr. Robert Abbé said that he had seen that very day the patient reported to this society last year, and upon whom he had reported three years ago. The patient was steadily progressing, and there was nothing to indicate any active disease. The tumor was a large one, and at the time of operation involved the cord, so that it was necessary to curette some of the cord away. There had been no increase in any of the cord symptoms. The arms, which were formerly paralyzed, could now be raised to the head. In sarcomata of the spinal cord he thought the growth was slow as compared with sarcomata in other parts of the body. Sometimes a tumor of the spinal cord might grow for a long time, and yet give rise quite suddenly to symptoms. All the cases of spinal cord tumors that he had had had been among males. The pain that he had seen in these patients had been distinctly of a rheumatic rather than of a neuralgic type. He did not quite understand why so many of the reported cases had proved fatal from infection or from shock, because it seemed to him that the operation should be conducted rapidly and with considerable safety. The hemorrhage in these cases was apt to be almost wholly venous, and practically it could be only controlled by pressure. A little strip of gauze pressed into the hollows as the laminæ were opened up would control the hemorrhage, and would generally prevent any great degree of shock. The dura should be opened at once if the tumor were not encountered, and should be split up for any distance necessary, and subsequently sutured with fine catgut. The escape of fluid did not seem to him of special importance; the leakage had always been slight, and had lasted only eight or ten days. The infection of these wounds in the past he thought had been largely due to the use of impure catgut.

Dr. Collins explained that he had not meant to say that pain was not an important diagnostic symptom, but he wished to call attention to the fact that the pain was not by any means characteristic as would appear from the descriptions given in the books.

GENERALISED SCLERODERMA WITH VASCULAR SPASM
OF THE TONGUE.

Dr. Joseph Fraenkel presented a girl showing generalized scleroderma and called attention to a peculiar symptom. After the use of the tongue the patient complained of some pain in this organ, and inspection showed a vasomotor spasm leading to the production of an area of whiteness and dryness on the tongue.

A CASE OF CONGENITAL MULTIPLE SCLEROSIS.

Dr. Fraenkel also presented a girl of seven years. The parents are cousins. Five other children are in the family and are living and well. One child died in infancy, having apparently suffered from the same disorder as this patient. The child presented was born after an easy and natural labor, but did not walk and talk. The head was small and the eyes had the Mongolian set. Vision and hearing were apparently normal, and the child was docile. Nystagmus was observed on making the little one look upward. The patient was unable to stand or sit up without assistance, and the gait was typically ataxic. The speech was defective and somewhat sullabic. There was no actual motor paralysis. There was marked incoördination of the muscles of the upper extremities of the intentional type, more marked on the right side. The reflexes were normal. Both feet were very red in consequence of vasomotor disturbance. The only diagnosis that he could make was congenital multiple sclerosis.

A CASE OF SUBACUTE POLIOMYELITIS.

Dr. J. Ramsey Hunt presented a man, thirty-nine years of age, a boiler-maker by occupation. In 1889 there was an initial lesion apparently followed by a mucous patch on the tongue, but he received no internal treatment. Nine years ago he worked in a white lead factory, but developed at that time no symptoms of lead poisoning. His present trouble dated back to last January. The first symptom was a weakness or stiffness of the arms, but he was able to continue at his arduous work of wielding a sledge hammer. Finally one day he became paralyzed. When seen, five months later, the muscles about the left shoulder were paralyzed and gave a complete reaction of degeneration, while the other muscles

were normal. One month later some weakness was experienced on the other side, and this was followed by almost complete paralysis about a week later. There were no electrical changes, but there were fibrillary twitchings. The reaction of degeneration appeared in two or three weeks in those muscles corresponding to injury at Erb's point, but some improvement subsequently took place. The paralysis at the present time had the same localization. There was an exaggerated tendon reflex, but no sensory symptoms were present. The man was under large doses of iodide at the time of the second paralysis.

Dr. Pearce Bailey said that he had seen two similar cases, in which the course was acute and was localized in the shoulder girdle muscles. Both of these patients were syphilitic. He regarded the condition as a localized syphilitic myelitis, probably associated with hemorrhages.

Dr. B. Sachs said he was disposed to look upon this as a case of specific amyotrophic lateral sclerosis.

Dr. Fraenkel said that it was an old notion that lead paralysis developed in the muscles most used, and this seemed to apply to the case under discussion. He was not willing to entirely exclude lead.

Dr. Joseph Collins presented for Dr. I. Abrahamson a similar case, occurring in a man of forty-eight years, a plumber's helper. He had had syphilis when thirty-six years old, for which he had received treatment for two months. He was well until the last of August, 1902, when he noticed, while wielding a hammer with the left hand, that the left upper extremity was becoming powerless, and from that time to this he had not been able to use this extremity. Two or three weeks afterward he complained of weakness of the right forearm. A few weeks later he noticed that the left shoulder was shrunk. At present there were: (1) Atrophy of the left shoulder muscles, biceps, triceps and forearm muscles, especially the flexors, and atrophy to a slighter degree of the flexors of the right forearm; (2) fibrillary twitching of the most atrophied muscles; (3) exaggeration of all the tendon jerks; (4) weakness of the legs; (5) pin-point pupils; (6) no sensory disturbances; and (7) no typical reaction of degeneration in the atrophying muscles. The case was con-

sidered to be one of amyotrophic lateral sclerosis on a syphilitic basis. It is not unlikely that the pathological process was a focal syphilitic degeneration of the cervical cord, the ventral horns being principally involved. The primary change was probably in the vessels. Clinically, this case, and the case presented by Dr. Hunt, must be looked upon as amyotrophic lateral sclerosis. Dr. Collins said he referred to this subject to a greater length in his paper about to be read.

Dr. Hunt said he believed his case differed from an amyotrophic lateral sclerosis in its acute onset and course. The onset must have been accompanied by a great deal of edema.

Dr. Adolf Meyer presented a young man, who in 1894 injured the vertex by diving into the water and striking a rock. Since that time there had been increasingly severe headache, and in 1897 ocular symptoms appeared. After a while both eyes became blind, the last sector from which vision disappeared being the right upper one of the field of vision. In 1899 he experienced peculiar attacks of numbness on the left side of the face, occurring from ten to fifteen times a day. In August, 1900, there had suddenly appeared an oozing of fluid from the right nostril. This was followed by an improvement in all the symptoms. At the present time there was no facial palsy, but on opening the mouth the jaw deviates to the right. Several times the patient while suffering from a cold causing occlusion of the nostrils, had gone into a deep sleep. Last May, without any such occlusion of the nose, there was a general convulsion, and these attacks were repeated this fall. Some months ago there was a strong tendency to walk in a circle. The speaker said that he had seen the patient soon after the oozing had begun, and that it was possible to demonstrate in the fluid reducing substances. At present, this fluid contained glucose, so that it was undoubtedly cerebro-spinal fluid.

Dr. William M. Leszynsky said that he had had the pleasure of studying the case reported by Dr. W. Freudenthal. That patient was a lady of about fifty-five years of age, who suffered a good deal from headache. There was a mild optic neuritis affecting both eyes, and the fluid escaped from the nose periodically in large quantities. There was no somnolence, and the patient was chiefly disturbed by the discharge of fluid.

Dr. B. Sachs said that he had had under observation for four years a girl afflicted with an unquestioned tumor of the brain, its presence having been demonstrated by trephining. The girl had improved very much, although blindness persisted. For more than a year there had been periodic oozings from one nostril. Examination proved the fluid to be cerebrospinal. The symptoms had been greatly relieved by the oozing of this fluid.

Dr. J. Ramsey Hunt said that he had seen in Bellevue Hospital last winter a woman who had been shot through the head. There was paralysis of the motor portion of the fifth nerve and a partial paralysis of the seventh nerve on the left side, with electrical changes showing the peripheral origin. The patient recovered quickly, and left the hospital in two weeks. At this time there was an occasional and scanty oozing of perfectly clear fluid from the nostril. It probably resulted from a comminution of the ethmoid and frontal bones.

Dr. Meyer said it seemed to be absolutely certain that the optic chiasm had been destroyed in his case by a tumor. It was probable that this case, as well as the one reported by Dr. Sachs, explained how this escape of fluid greatly prolonged the duration.

AMYOTROPHIC LATERAL SCLEROSIS.

Dr. Joseph Collins presented a paper on this subject. He said that this was among the rarest of all organic nervous diseases, and the diagnosis having only been made in his clinic seven times out of about seven thousand cases. In ten years at the City Hospital, where chronic nervous diseases were very common, he had not seen more than seven or eight cases. The general knowledge of the disease dated from Charcot's classical description in 1874. The following case was reported very briefly: The patient was a woman, thirty-seven years of age, who complained of pain in the head, and in the muscles supporting the head. There were atrophy of the muscles of the shoulder girdle, neck and hands, slight spasticity of the muscles of the upper extremities and Babinsky phenomena. There were early and profound bulbar manifestations. The duration of the disease was about three years. The patient also suffered from what he took to be major hysteria. The chief pathological findings were: (1) Uniform disappearance of the

ventral horn cells throughout the entire cord, affecting possibly the dorsal region more severely than the cord enlargements; (2) a zone of degeneration in the cervical and dorsal region encircling the horns; (3) a marginal strip of peculiar shape in the lumbar region; (4) deformity of the ventral face of the cord, due to a concave sinking in of the periphery; (5) a neuroglia proliferation in the degenerated white matter and also in the anterior horns cord enlargements; (6) evidence that the neuroglia proliferation was older in the cervical region; (7) atrophy of the anterior roots; (8) distinct evidence of cell degeneration; and (9) the pyramidal tracts were intact.

The question of whether the peripheral motor neurons or the central motor neurons were the first to be involved could not be stated. It was probable that in some cases the one, and in other cases the other, was first affected. He thought the lesion in some cases began in the anterior horn, and in the destruction of the cells there resulted in part in the disease, and accounted for the pathological findings. It was the decay of the column cells which caused the degeneration of the white matter in the case just cited. Destruction of these column cells led to the destruction of the fundamental columns. It was true this did not occur in every case because in such cases the destructive lesion of the spinal cells confined itself to the root cells and the column cells were not implicated. This probably explained all those cases of progressive muscular atrophy with changes in the white matter. There were now 11 cases on record in which the pathological process involved both systems of neurons in their entirety. However, the disease might exist in its most typical form without any involvement whatever of the pyramidal tracts. The changes in the spinal cord sometimes extended to the posterior columns, though the significance of this was not yet known. The speaker thought it must be admitted that amyotrophic lateral sclerosis was a different disease from spinal progressive muscular atrophy because of the different clinical course and anatomical changes. In amyotrophic lateral sclerosis there was a poison capable of destroying both the white and the gray matter. Whether this disease was a part of primary progressive muscular atrophy was another question, and, in his opinion, should be answered in the negative. The etiology of amyotrophic lateral sclerosis was

very obscure. After a careful examination of the entire literature he had selected the records of 94 typical cases, and had added to them nine of his own, four of them with autopsy. Of the 103 cases, 54 were males and 49 females. It was generally held that the disease was more frequent between thirty and forty, but in the hundred selected cases the fourth and fifth decades were found to be equally liable to the affection. The average duration of the disease was two years, though the minimum was a few months and the maximum nine years. The upper extremity was affected first in 39 cases; the lower in 14, and the upper and lower extremities simultaneously in 11 cases, while the disease came on with bulbar symptoms in 21 cases. In the last mentioned cases atrophy or spasticity or both appeared very soon in other parts of the body. Trauma did not seem to be an adequate cause of the disease. Overwork, especially that of gold-beaters, embroiderers and others, calling for exhausting work of special sets of muscles, did not seem to enter into the etiology. The disease occurred most among the working classes. A number of cases had developed shortly after parturition. Six of the patients gave a history of syphilis, but this was probably not more than the actual percentage of syphilization. In two of these cases, both his own, there might have been some relationship between the syphilitic infection and the amyotrophic lateral sclerosis. It was worthy of note that many of these patients had had syphilis, and had been workers in lead.

Dr. B. Sachs said that he thought the term, amyotrophic lateral sclerosis, was a far better clinical than anatomical designation. Clinically, the disease was recognized by the combination of spastic paraplegia with atrophic paralysis. The clinician could hardly avoid being impressed with the fact that there was not a single anatomical lesion for all these cases. In recent years he had seen quite a number of cases which he had labeled "spinal syphilis of the amyotrophic type," but he would not think of classifying them as true amyotrophic lateral sclerosis. He believed the relationship between amyotrophic lateral sclerosis and progressive muscular atrophy was closer than Dr. Collins supposed. Some cases of progressive muscular atrophy went on for a very long time without lateral column symptoms; in other cases, spasticity was an

early symptom. These differences seemed to be applicable by a difference in the acuteness of the disease as affecting the gray matter. In progressive muscular atrophy of the ordinary type the process was a very much slower one than in amyotrophic lateral sclerosis. He would not be willing to draw a sharp line of demarcation between the two diseases, for he felt they were closely allied. He had been very much impressed with Gowers' lecture on abytrophy or special vital defect. He doubted if those afflicted with either one of these two diseases would have developed them if they had not been born with some point of least resistance in the gray matter of the cord. He desired to call attention to the fact, that degeneration of the gray matter was not always followed by that degeneration of the white fibres which one would expect from that close association between the two which is assumed by the neuron theory.

Dr. J. Ramsey Hunt said that Dr. Spiller of Philadelphia had reported a case of amyotrophic lateral sclerosis of very acute onset. He found degeneration in the association tracts of the cortex, and suggested this was the anatomical basis for many of the mental symptoms not infrequently described.

Dr. Louis Faugeres Bishop said that he had at the present time in his hospital service a woman with well-marked amyotrophic sclerosis and the husband with right hemiplegia. The latter developed last. He was disposed to think that both had a common cause, probably syphilis.

Dr. Collins, in closing, reiterated his belief that spinal progressive muscular atrophy and amyotrophic lateral sclerosis are different clinically, etiologically and pathologically. To him the special feature of interest was that in some cases there was a transitional stage in which the lesion was limited to the commissural cells binding together different portions of the cord. He saw nothing in abytrophy which had any bearing upon amyotrophic lateral sclerosis. The latter was an acute, violent infection. Weak persons generally were spared, he thought, all through life from acute intoxications or infections. The etiological factor of the disease would probably be determined by the physiological chemist.

Officers elected: Dr. Pearce Bailey, President; Dr. J. Arthur Booth, First Vice-President; Dr. Frederick Peterson, Second Vice-President; Dr. B. Onuf, Recording Secretary; Dr. F. K. Hallock, Corresponding Secretary, and Dr. G. M. Hammond, Treasurer.

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EDITORIAL.

THE THREE PLAGUES OF THE TWENTIETH CENTURY.

We certainly do not wish to imply either that there are but three plagues in the twentieth century or that the three of which we shall speak are peculiar to this century. What we do maintain is that these three plagues have become better known, their dangers more fully appreciated, and the impotence of the medical art in their treatment more thoroughly demonstrated than at any previous period in medical history. The three great plagues to which we desire to call attention are syphilis, leprosy, and tuberculosis. It may be said with confidence that all three of these diseases may boast of a great antiquity, notwithstanding the arguments made by some writers that the great antiquity of some is not absolutely proven. We do not propose here to enter into any literary critique of this moot question to which entire volumes have been devoted. So that the real subject of interest to us is that which will be taken up here.

To begin with, these three diseases are disseminated throughout the world and affect individuals in all climates and irrespective of age, sex or condition or color. They are really plagues from the fact that they are neither limited nor sporadic. They are disseminated and to a certain degree epidemic. They are all essentially chronic diseases, and whilst two have been proven to be of bacterial origin there is but little doubt that the third one is also of the same nature. All three are of a nature that is destructive in its processes and in the development of each every tissue of the human organism is attacked from the epidermal structures to the deep nerve centres of the cord and brain. All three may be improved by treatment, but a radical cure in any one has not yet been discovered.

There is one certainty, however, which is that the diseases under consideration have not been made to disappear and but little success has attended the efforts which have been made to reduce the increase in them. In other words, the repression of these diseases has not been accomplished, much less their suppression. Methods which are susceptible of application have not yet been devised although the best efforts of the most advanced thinkers of the century are being devoted to the problem. These are not individual efforts but rather the concerted action of active workers in these fields. Thus we have the various European societies for the suppression of vice and venereal disease, the International Congress for the Regulation and Suppression of Prostitution, all having for their prime object the diminution of cases and final disappearance of syphilis as it now occurs in the world. Then we have the International Congress on Leprosy, whose real object is the prevention of the spread of this plague which has existed in the Far East time immemorial and in Europe since it was imported there by the ancient Crusaders. Tuberculosis has also been the object of the attention of many societies, more especially of the International Congress on Tuberculosis which held its last meeting in St. Louis early in October, 1904.

All the meetings of these societies and congresses have added much to our knowledge of the subjects with which they have been concerned, but up to the present time they have not accomplished anything tangible and no results of a

satisfactory nature have been obtained. There seems to be something wanting, something perhaps of a practical nature as opposed to the great mass of theory and of speculation with which we have been flooded. For instance, among other things, we do not care so much to hear about the treatment of the different members of the great triad of diseases. What we really wish to know is how to cure them. When we arrive to this knowledge it is safe to assert that these three plagues will no more exist; but until cures are found efforts made to limit or to suppress them will always prove more or less abortive. Scientists, investigators, experimentors and all those engaged in serious research work and investigations will find a rich and still unworked field open to them in the domains of syphilis, leprosy, and tuberculosis. May the day be hastened when the road to the discovery of a cure of any one of these shall be pointed out by a medical Columbus.

PINTA.

There appears in the October issue of the *Journal of Cutaneous Diseases*, including Syphilis, an article on Pinta, which is quite interesting. It is contributed by Dr. Paul G. Woolley, Assistant Director Serum Laboratory, Manila, P. I. He states that, under the terms paño blanco, pinta, pinto, caraté, mal pintado, mal delos pintos, mal del pinto, peint, cute, catur, quirica, pannus carateus, and the spotted disease of Central America, are included a group of dermatomycoses characterized by peculiar pigmented patches on the skin, in the scales from which hyphæ, or spores, or both, of a mold-like fungus are found, which resemble in some cases penicillium; in others, aspergillus; in still others, monilia.

Heretofore this epiphytic disorder has been reported from Mexico, Central and South America; and another disease resembling it in some respects has been observed by Legrain in North Africa, and by Sandwith in Egypt, but so far as he knows no previous report has come from the Philippine Islands.

The author states that the case he wishes to record is not the only one that he has seen in Manila, but it is the only one

from which he has been able to obtain specimens for examination. But all of the affected persons whom he has noticed have shown only the white variety, of which the following case is an example.

The history of the case is as follows: A Filipino of fifteen years, in good health, and a laundryman. There is no similar disease in any of his immediate family.

Upon inspection it is noticed that there are pinkish-white patches, irregular in size and shape, on ankles, dorsa of feet, shins, knees, elbows, hands, wrists, and one on the right shoulder. The last mentioned lesion the boy says was the one he noticed first.

The largest lesions are over the external malleoli of the ankles. These, the boy says, appeared after the one on the shoulder. The patches on the knees and elbows appeared still later. None of these patches are of the same shape or size, nor are they distinctly and definitely defined, but shade from their clear white centers to the normal brown of the skin. Neither are the lines of extension regular, so that the outlines of the patches are irregular and crenated. About the larger areas are smaller ones, some barely visible and of a faint pinkish-white or very light-brown color.

On palpation one perceives that the skin over the larger patches is slightly rougher than the normal skin, and that it feels somewhat thicker. The palpating finger can detect no abnormal variation in the covering of the smaller spots. There is but a minimum amount of scaling, and there is some itching.

The rate of extension has been extremely slow, for in three years the largest patch has a diameter of but 7 and 5 centimeters.

When asked regarding the cause, the boy said that the first spot came from carrying laundry baskets on his shoulder, and that the other spots followed traumata of one kind or another. There are no lesions on the palms of the hands or soles of the feet.

Scrapings were examined in a 25 per cent. solution of caustic potash. Among the epithelial cells were observed branching, segmented hyphæ, forming a coarse meshwork. The mycelium were somewhat finer than that of trichophyton. In

general, it was evenly refragent, but in places beaded or regular. The spores were darker in color than the rest of the organism and less refractile. An occasional fructification was found in the smears, and in these the arrangement of the spores was like that of penicellium. When stained with dilute fuchsin the spores were stained a very deep red. The hyphæ showed an inner segmented arrangement with continuous enclosing capsule.

There can be no doubt of the nature of the disease. The clear white spots, with almost normal-looking skin, can be mistaken for no other skin affection. Diseases caused by trichophytons are extremely common in Manila, and are generically known as "dhobie itch," and is extremely prevalent in the natives.

This article certainly forms an important contribution to the subject of exotic skin diseases as observed in the Philippines, and we have no doubt but that other observers will add their observations of other dermatic affections peculiar to these islands.

Why Minor Gynecological Operations Fail to Give Anticipated Results.—Sigmund Goldberg first defines a minor gynecological operation as one which does not involve the opening of the peritoneal cavity. To be of any permanent benefit, he says, it must be performed within at least one year from time of the infliction of the original lesion. After the passage of about a year, either Alexander's operation, trachelorrhaphy, or curettage, or all combined, will be insufficient to restore the patient to perfect health. The reason for such failure in the great majority of such cases, after one year, is that the adnexa are sure to be involved. The best course will be to do some operative procedure intraabdominally, and not by the internal inguinal ring puncture of Goldspohn, but by free incision, so that the exact condition can be ascertained and properly treated, and this the author holds to be the proper procedure, rather than to depend upon the uncertainty of physical palpation.—*Medical Record*.

BOOK REVIEWS.

Diseases of the Stomach and Intestines. With an account of their relations to other diseases and of the most recent methods applicable to the diagnosis and treatment of them in general; also, "The Gastro-Intestinal Clinic," in which all such diseases are separately considered. By BOARDMAN REED, M.D. 8vo. pp. 1021. Illustrated. [New York: E. B. Treat & Company. 1904. Price, cloth, \$5.00 net; half-morocco, \$6.00 net.

The name of the author of this work is one which has been long well-known as an authority on the subject whereon he writes. It is certainly one of the most important branches of medicine, and the diseases of the different portions of the alimentary tract occur very frequently, and it is unfortunate that their true nature is recognized so seldom, in consequence of which treatment is inadequate, misdirected and but too often ends in failure and the final death of the sufferer. For this reason an authoritative work on the subject should prove a source of more than ordinary satisfaction to members of the medical profession, and the more so when it is one as thorough, comprehensive and reliable as the one before us. We have been more than agreeably surprised at seeing it, and have at last realized that we have one more good and reliable instrument to add to our already large medical armamentarium.

The author disclaims having made an attempt to write a complete and thorough treatise upon the subject, as his main object would be defeated thereby. He has rather made it his object to write a thorough and practical one-volume work, and he has certainly succeeded in doing this. He has not devoted a large amount of space to the discussion of moot points, nor has he burdened the pages of his book with a bibliography of each subject upon which he touches, for the number of books and articles which have been written on these subjects is something enormous and daily increasing. What he has endeavored to do and has quite successfully done, in our opinion, is to furnish the medical profession with a knowledge of the newer methods available in the diagnosis and treatment of gastric and intestinal diseases and disorders. This is certainly a prime necessity to-day, and one which is not only felt by the general practitioner, but by every one engaged in medical and surgical practice, special as well as general. To all of these the volume before us will appeal, as its practicability and usefulness will immediately become apparent.

The contents of the book are embraced in eighty-three lectures, which systematically cover the entire subject. These lectures are divided into four parts. Part I. is concerned with

Anatomic, Physiologic, Chemic, and Diagnostic Data. In Part II. are given Methods of Examination. Part III. deals with Methods of Treatment; and Part IV. is taken up with the Gastro-Intestinal Clinic. These lectures are based, in part, upon those delivered to the author's classes in the Department of Medicine of Temple College, Philadelphia, and in part upon the "Talks to General Practitioners," which he contributed to the *International Medical Magazine*, of which he was the editor at the time. A large number of the lectures have been especially prepared for this volume, including a special one, entitled "A Symptomatic Guide to Diagnosis." This is a unique feature which will certainly prove of more than ordinary help and usefulness to both students and practitioners, and we have but little doubt that it will be that portion which will be most studied and best remembered, as it will prove itself to be the best as a practical working guide.

Whilst the author has not been ultra-conservative in retaining all the older methods, he has been inclined to be conservative in regard to advising old and well-tried remedies to be abandoned. On the other hand he has not hesitated to give the due and proper credit to the most recent innovations in the way of therapeutic resources when such credit seemed due. Electrostatic currents, x-rays, violet rays, radium, etc., as well as mechanical vibration, manual therapy, hydrotherapy, exercise (active and passive), and all approved hygienic measures, more especially diet, are taken up and considered. To our mind the most interesting portion of the book is that included in Part IV., as it is certainly the most instructive. It may be read and re-read, and ever with increasing interest.

This book is certainly one which is well written and adapted to those for whom it has been written. The author has adopted an easy, flowing style, and he certainly possesses the art of interesting his reader in the subject whereof he treats. The publishers have certainly made a handsome volume of this work, the paper being of superior quality, the print clear, and the binding excellent. The book should certainly win the favor of both students and physicians.

A Practical Treatise on Diseases of the Skin. For the use of Students and Practitioners. By JAMES NEVINS HYDE, A.M., M.D., and FRANK HUGH MONTGOMERY, M.D. Seventh and Revised Edition. 8vo. pp. 938. Illustrated with 107 Engravings and 34 Plates in Colors and Monochrome. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, cloth, \$4.50 net; leather, \$5.50 net.

There is certainly no department of medicine which has made more progress or greater strides daily than that of dermatology. The literature of the subject is simply immense and

the number of articles published in those journals exclusively devoted to this branch is simply appalling. Specializing within a specialty is what we are promised, and as a beginning of this we have the publication *Lepra* exclusively devoted to leprosy. However, when in the face of such a prolific branch of medicine two authors are able to furnish us a volume which is practically a treatise and fully up to date, the praise accorded them should, indeed, be great. We certainly cannot find words adequate to express our great admiration and full appreciation of the work before us.

This work is more or less familiar to all of our readers, and yet the thorough and systematic revision it has undergone at the hands of its authors makes it practically a new work. The general subject of pathology has been rewritten, this having been necessitated by the many discoveries made of late years by workers in this field. This certainly lends a new appearance to this portion of the treatise, and the same sort of complete revision has made a new work of the whole book. This change has been in the way of improvement, due prominence having been given to every fact of importance which the fruitful fields of recent investigation have furnished. Mere theoretical questions have received critical discussions of the highest value, and in this lies much of the value of this late edition. Thus, eczema is looked upon as a dermatitis not necessarily catarrhal in nature, and the authors in like manner dispose of many others of the older ideas and definitions. The reasons for these changes are certainly sufficient. So far as the treatment of the subject is concerned, it is on thoroughly modern lines, and the completeness which characterizes the discussion of each subject is at once convincing as well as satisfactory.

The classification of skin diseases adopted in this treatise is essentially that of the American Dermatological Association based upon Hebra's. In our opinion it is the best and most practical, both for the purpose of being a guide in writing a work on skin diseases and as a good, practical guide in the formulation of a diagnosis. In addition to this it affords a ready and practical method for easy reference, and we have no doubt that it will hold its own and continue a favorite until a more perfect and as simple a classification is introduced by some modern authority as great as Ferdinand von Hebra found himself to be in his time. The preliminary chapters on anatomy, physiology, treatment, etc., are very thorough and well balanced. The subject of etiology in general, and especially in connection with the various diseases taken up, is very thoroughly considered, and is not the least valuable of the subjects considered in this work. It is this very method of handling the subject which has made the treatise before us so popular among the

profession; and has led to the issue of so many editions in such a short time, each one so much better than its predecessor.

The sections devoted to radio-therapy and photo-therapy are very full and contain all those necessary details which are called for in the successful application of these forms of treatment. One very good feature in connection with these is the elaboration of the indications for their employment in the various diseases for which their use is to be recommended. It is to be regretted that the recent death of Finson deprived us of much that might have been further learned concerning photo-therapy. The most recent discoveries in the etiology of scarlatina, variola, pyroplasmiasis, blastomycosis, etc., are treated of critically. The illustrations of this book are numerous and very well executed. The colored plates are especially excellent and everything in connection with this work is, in all respects, of the best and handsomely presented. The publishers have made this a book of which they may well be proud, and the authors have added another large and well-fashioned stone to the great edifice of American Dermatology.

O-D.

Diseases of the Nose, Throat and Ear and Their Accessory Cavities. By SETH SCOTT BISHOP, M.D., D.C.L., LL.D. Third Edition, Thoroughly Revised and Enlarged. 8vo. pp. 564. Illustrated with Ninety-four Colored Lithographs and Two Hundred and Thirty Additional Illustrations. [Philadelphia: F. A. Davis Company. 1904. Price, cloth, \$4.00 net; sheep or half-russia, \$5.00 net.

Our readers may remember that it is not so many years ago that the nose as an organ to which special attention was paid by specialists was a comparatively unknown factor. The birth of rhinology awakened much interest in it and, as a result, it bids fair to become a formidable rival to both laryngology and otology so far as awakening interest in the medical profession is concerned. We have found otology and ophthalmology dissociated from one another and rhinology bids fair to occupy an independent position and have exclusive attention given to it. The nose and its diseases are certainly important subjects to which a large share of the attention of the medical profession is devoted, and quite deservedly so.

The book before us certainly demonstrates this very satisfactorily. The ear has been placed in the background, so to speak. Whilst the author is an accomplished aurist he prefers to devote more attention to the larynx, pharynx and nose. Of course he gives a full share of attention to the ear, but he does not give it the proportionate amount which the others receive. That he does give it adequate relief is shown by the work he has done,

but more especially in the mastoid operation. He describes very fully his modification of Stacke's operation and the illustrations given of the results of both are certainly very much in favor of the modified Stacke. In considering tinnitus aurium the author acknowledges his inability to cure this intractable symptom. He looks upon it as a symptom of sclerosis and yet as good authority denies this. It is certainly a question which must be considered still *sub judice* and all that is being done for its relief or modification is certainly experimental.

Diseases of the nose, of the pharynx, and of the larynx are certainly considered in a much more satisfactory manner, and this is no doubt due to the fact that these organs are more susceptible to thorough examination. For this reason they are illustrated in more satisfactory manner. Yet it must be admitted that in the way of illustrations the book before us is not only profusely but satisfactorily and properly illustrated with colored plates and well-executed engravings and half-tones. The entire work has been thoroughly revised and recast and the author has laid a most excellent foundation for a fourth edition. We are very much pleased with the book, which should be eagerly sought by all practitioners of medicine who desire to perfect themselves in the branches of which it treats. The publishers have made a very excellent volume of this and are deserving of great praise for their good work.

The Doctor's Recreation Series. A Book About Doctors. By JOHN CORBY JEAFFRESON. Series Edited by CHARLES WELLS MOULTON. 8vo. pp. 516. Illustrated. [Akron, Ohio: The Saalfield Publishing Co. 1904. Price, silk cloth, \$2.50; half-morocco, \$4.00. Sold by Subscription Only.

Every one during the course of his existence has been confronted by the necessity of having recourse to a physician's help or has needed his services. The doctor has come to stay and he is to-day an institution. Whilst many describe him as an evil, like many others he is a necessary one, and none so ready to accept jibe and vituperation in good part as he. The doctor is a necessary adjunct to every family be it large or small, and whilst his bills are turned down with scorn his presence in time of need is hailed with joy and he is welcomed as the savior of the family. It is for these reasons partly that all those things which relate to doctors are interesting to the public, and to none more so than to physicians themselves, more especially when the matter relates to well known members of the medical profession who paid their last debt to nature many years ago. It is of the dead that we always speak charitably and let the living take care of themselves, and this is best exemplified in the case of doctors.

The book before us has long been famous. It is, in reality, the best known of the thirty books written by the author. It is a monumental work, of historical interest and written in a manner which will captivate the reader. Whilst devoted chiefly to short biographies of English physicians of note, it also contains short essays on various subjects, and, as whole, it is replete with anecdote, wit and many interesting matters long since forgotten or but illy remembered. Thus among the subjects considered are, Something About Sticks, and Rather Less About Wigs; Quacks; the Doctor as a *bon-vivant*; Fees; Bleeding; the Quarrels of Physicians; the Laws of Physicians; Literature and Art, etc. Among the biographies which are given are those of Sir Thomas Brown and Sir Kenelm Digby, Sir Hans Sloane, John Radcliffe, Richard Mead, Messenger Monsey, Akenside, Lettsom, and Sir John Long. These were certainly famous in their day, and it is more than usually interesting to find such well written records of these peerless members of the English medical profession presented to us clothed in such a handsome volume as the one before us. The book closes with Number Eleven—a Hospital Story, a chapter on Medical Buildings, and the Country Medical Man.

It would be a difficult matter to write an adequate review of such a book, filled as it is with humor, satire and good-natured jest. This is the portion which adds zest to its reading, although it must not be forgotten that it is presented in a sufficiently serious form as to be full of the most valuable information as is fully attested by the full index which closes the volume. We are fully convinced that he who reads but one or two pages will be forced to read it all, and then regretfully lay it down because it does not contain more. It is a book full of clean as well as interesting and humorous matter, of such a nature that it could well grace the parlor-table of any one's residence and perhaps more aptly so a physician's.

The illustrations are from full-page plates executed in the highest style of art and each one a favorite with doctors. They are: Prof. Billroth's Surgical Clinic (A. F. Seligmann); The Founders of the Medical Society of London; An Accident (Dagnan-Vonveret); and the Anatomist (Max). We are free to say that he who buys this volume will not make a mistake, nor, for that matter, if he subscribes to the entire series.

Enlargement of the Prostate. Its Treatment and Radical Cure. By C. MANSELL MONELL, M.D. Oxon., F.R. C.S. Third Edition. 12mo. pp. 204. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.75 net.

The prostate is still an object of great interest to surgery, more especially to those who devote particular attention to genito-urinary surgery. The author of the book before us has

had much experience in the treatment of enlarged prostate, and we quite agree with him that many cases could be cured were it not for the consequences which follow the indiscriminate use of catheters which, in but too many instances, inflict irreparable injuries upon the bladder and kidneys of the patient. There is also a great tendency observed in a large number of physicians of using operative measures where they are not indicated. In fact, the furor operandi observed in many of the younger members of the profession and the facility with which they discover prostatic disease are indications of the necessity under which they labor of reading a good, reliable guide like the one before us. The author is very thorough in his treatment of the subject and he only finds occasion to reiterate what he wrote five years ago. In speaking of Bottini's operation he deplores the fact that this method of treating enlargement of the prostate has not become so popular as it deserves to be. The mortality is no higher than four per cent., yet it is an objection which will have to be overcome, no doubt, by a proper selection of cases.

The book is excellent and well printed in good, clear type. It should be in the hands of every one devoted to genito-urinary surgery and of every general practitioner and surgeon.

Hand-Book of the Anatomy and Diseases of the Eye and Ear.

For Students and Practitioners. By D. B. ST. JOHN ROOSA, M.D., LL.D., and A. EDWARD DAVIS, A.M., M.D. Square 12mo. pp. 297. [Philadelphia: F. A. Davis Co. 1904. Price, \$1.00 net.

This may seem to be a small book so far as size is concerned, but it is a condensed treatise on the subject of which it treats. It is so written as to be not only instructive to undergraduates but equally full of information for practitioners in their post-graduate years of practice. The authors have made an effort and succeeded well in presenting a book of real practical value unburdened by a single redundant or unnecessary word. A reading of it will show that it is a condensed treatise boiled down to a few words, presented in a handy little volume useful for ready reference, and is a convenient remembrancer of those little things which will naturally escape the memory of one who is not daily in contact with the subject,

A very great advantage which will be noted in connection with this hand-book is that it is written for to-day and all that it contains is of the day and for the day and nothing it contains is of yesterday. The authors are both well known teachers and writers and we certainly would expect nothing from them but a first-class book; and this is what they have presented to us. We are sure that no teacher or student will make a mistake by adopting this book as a text-book. The students who employ

it will find it profitable to consult it in their days of active practice subsequent to graduation perhaps more so than they did in their undergraduate days. We are much pleased with the clear, succinct, and terse manner in which the anatomy and diseases of the eye and ear are handled in this volume, and it bids fair to become popular directly it is known.

The publishers have made a neat, clearly printed, handy little volume of this and have issued it at a price within the reach of all.

Refraction and How to Refract. Including Sections on Optics, Retinoscopy, the Fitting of Spectacles and Eye-Glasses, etc. By JAMES THORINGTON, A.M., M.D. Third Edition. 12mo. pp. 314. Two Hundred and Fifteen Illustrations, Thirteen of which are Colored. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.50 net.

The success of this little book has been phenomenal. The first edition appeared in 1900 and the present, although put out as the third, is in reality the fourth. The author has written this little guide in a very perspicuous manner, and he has so fully illustrated it that any physician may understand the subject of refraction and not regard it any longer as a *terra incognita* only known and recognized by oculists. The necessity for such a book at the hands of the general profession has been testified to in an ample manner by the demands which have been made for it. We are pleased to note the great success which has been achieved by its author, and this latest issue is without doubt destined to achieve a greater success than any of its predecessors, of which it is an amplification with many additions and corrections. The book is issued in the same good style which characterized previous issues and the publishers have certainly made a handsome volume of it.

A Manual of Physiological and Clinical Chemistry. By CHAS. H. BARTLEY, B.S., M.D., Ph.G. Second Edition, Revised and Enlarged. 12mo. pp. 188. With 47 Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

The author of this little book has very properly entitled it Clinical Chemistry. It is a good working guide for the laboratory as well as a condensed text-book of the subject whereof it treats. He has very sensibly refrained from attempting to make it an incomplete book on microscopic examination of blood and urine, but has rather essayed to present so much physiological and clinical chemistry as will prove useful to the student during his college course and form an adequate introduction to further study of the subject later on. We are very

well pleased with this second edition, which shows a careful revision of the first and a proportionate improvement in the manner of presentation of the subject matter. It will no doubt prove as popular with medical students as its predecessor has and this has been marked. The publishers have brought it out in excellent form.

Diet and Food. Considered in Relation to Strength and Power of Endurance, Training and Athletics. By ALEXANDER HAIG, M.A., M.D. Oxon., F.R.C.P. Fifth Edition. 12mo. pp. 138. With Seven Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

This little book is now in its fifth edition and deservedly so. The author very reasonably argues that meats and foods rich in albumen, whilst not increasing strength, but rather the reverse, increase the amount of uric acid in the system and this brings on a series of attendant symptoms which are anything but good. So that the author, among other things, concludes that a "diet entirely free from flesh, tea, coffee and similar alkaloid containing vegetable substances is the best for training and athletics." The natural corollary to this is certainly obvious. The teachings of this book are certainly repugnant to the majority who are flesh eaters and imagine they suffer if deprived of meat in their diet; yet experience has often demonstrated the fallaciousness of this position. The book before us is, in the main, sound in its teachings and should be in the hands of not only every physician but of every intelligent person interested in his physical welfare.

The Urine and Clinical Chemistry of the Gastric Contents, the Common Poisons, and Milk. By J. W. HOLLAND, M.D. Seventh Edition, Revised and Enlarged. 8vo. pp. 172. Forty-one illustrations. [P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

This is an excellent book for the pocket and is particularly adapted to the use of students. The text is printed but upon one side of every leaf, the other being blank and thus may be made useful for the jotting down of notes. It is a very good working guide for the examination of morbid urine, the better and the newer tests being given. There is an excellent chapter on examination for common poisons, including an analytic table for common alkaloids. There is a good chapter devoted to the study of normal milk, and in addition to this are given directions for milk testing and for milk examination. The book ends with an account of the clinical examination of milk by the centrifuge method and the formulas of Hebner and Richmond. In fact, although the matter in this little book is

condensed it is thorough and very useful. It may be easily rendered useful by physicians as the methods given are simple and easy of application.

THE MEDICAL EPITOME SERIES.

Nervous and Mental Diseases. A Manual for Students and Practitioners. With an Appendix on Insomnia. By JOSEPH DARWIN MAGEL, M.D. Series Edited by VICTOR COX PEDERSEN, A.M., M.D. 12mo. pp. 276. Illustrated with 46 Engravings. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, \$1.00 net.

Whilst all the numbers of the Medical Epitome Series are good, the present one is entitled to special mention as being above the average in thoroughness and excellence. The author has succeeded in presenting to us the teachings of authors and lecturers of high standing in a condensed form. The value of this has been considerably evidenced by the good illustrations which are given and which are of a high order of merit. The chapter on insomnia is a very good one and thoroughly up to date. The entire volume is one which thoroughly covers the subject in a comparatively small number of pages. We are certain that it will prove itself a welcome epitome to medical students and a useful remembrancer to practitioners. The publishers have made an attractive little volume of this.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

Enlargement of the Prostate. Its Treatment and Radical Cure. By C. Mansell Moullin, M.D. Oxon., F.R.C.S. Third Edition. 12mo. pp. 204. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.75 net.

A Manual of Physiological and Clinical Chemistry. By Elias H. Bartley, B.S., M.D., Ph.G. Second Edition, Revised and Enlarged. 12mo. pp. 188. With 47 Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

The Urine and Clinical Chemistry of the Gastric Contents, the Common Poisons, and Milk. By J. W. Holland, M.D.

Seventh Edition, Revised and Enlarged. 8vo. pp. 172. Forty-one Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

Hand-Book of the Anatomy and Diseases of the Eye and Ear. For Students and Practitioners. By D. B. St. John Roosa, M.D., LL.D., and A. Edward Davis, A.M., M.D. Square 12mo. pp. 297. [Philadelphia: F. A. Davis Company. 1904. Price, \$1.00 net.

The Doctor's Recreation Series. A Book About Doctors. By John Corby Jeaffreson. Series Edited by Charles Wells Moulton. 8vo. pp. 516. Illustrated. [Akron, Ohio: The Saalfeld Publishing Co. 1904. Price, silk cloth, \$2.50; half-morocco, \$4.00. Sold by subscription only.

Diet and Food. Considered in Relation to Strength and Power of Endurance, Training and Athletics. By Alexander Haig, M.A., M.D. Oxon., F.R.C.P. Fifth Edition. 12mo. pp. 138. With Seven Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

Refraction and How to Refract. Including Sections on Optics, Retinoscopy, the Fitting of Spectacles and Eye-Glasses, Etc. By James Thorington, A.M., M.D. Third Edition. 12mo. pp. 314. Two Hundred and Fifteen Illustrations, Thirteen of which are Colored. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.50 net.

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Diseases of the Nose, Throat, and Ear and their Accessory Cavities. By Seth Scott Bishop, M.D., D.C.L., LL.D. Third Edition. Thoroughly Revised and Enlarged. 8vo. pp. 564. Illustrated with Ninety-four Colored Lithographs and Two Hundred and Thirty Additional Illustrations. [Philadelphia: F. A. Davis Company. 1904. Price, cloth, \$4.00 net; sheep, or half-russia, \$5.00 net.

A Practical Treatise on Diseases of the Skin. For the Use of Students and Practitioners. By James Nevins Hyde, A.M., M.D., and Frank Hugh Montgomery, M.D. Seventh and Revised Edition. 8vo. pp. 938. Illustrated with 107 Engravings and 34 Plates in Colors and Monochrome. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, cloth, \$4.50 net; leather, \$5.50 net.

Diseases of the Stomach and Intestines. With an account of their relations to other diseases and of the most recent methods applicable to the diagnosis and treatment of them in general; also, "The Gastro-Intestinal Clinic," in which all such diseases are separately considered. By Boardman Reed, M.D. 8vo. pp. 1,021. Illustrated. [New York: E. B. Treat & Company. 1904. Price, cloth, \$5.00 net; half-morocco, \$6.00 net.

The Medico-Chirurgical Journal will, in the future, be issued every month instead of for only ten months a year, as heretofore. This is a healthful sign, and we are pleased to see this sign of improvement in our valued cotemporary.

Another Journalistic Consolidation.—We learn that our old and esteemed cotemporary of other days, *Gaillard's Medical Journal*, has been merged in *Southern Medicine*, of Savannah. We can make no comments, of course, until we see the result of the fusion.

Blood Pressure, as affecting Heart, Brain, Kidneys and general circulation. A practical consideration of Theory and Practice. By Louis F. Bishop, A.M., M.D., Physician to Lincoln Hospital and French Hospital, New York. 12mo., cloth, \$1.00. Will soon be issued by E. B. Treat & Co., New York.

The St. Louis Medical Review recently changed hands, the control, including the editorship, having passed into the hands of Dr. Kenneth W. Millican. The new editor is not unknown to medical journalism, as for upwards of the past six years he has been associate editor of the *New York Medical Journal*. He will devote his entire attention and energies to the interests of the *Review*. We are pleased to welcome Dr. Millican to St. Louis.

"Your Mother."—We have just received one of the most beautiful home songs that has of late come to this office. It is called "Your Mother," written by J. T. Rider. This is a song that everybody ought to buy and everybody ought to sing. Price, 50 cents per copy. Readers of the JOURNAL, by sending 35 cents in postage stamps to the Theatrical Music Supply Company, 44 West 28th street, New York, will receive a copy mailed to them post-paid.

Journal of the Medical Society of New Jersey.—We read in the *Pennsylvania Medical Journal*: "The Medical Society of New Jersey, the oldest state medical society in the United States, having had a continuous organization since 1766, has begun the publication of its transactions in monthly installments instead of in an annual volume. The first number of the Journal of the Medical Society of New Jersey appeared

this month, with Richard Cole Newton, M.D., Montclair, N. J., as editor. The publication committee says: 'We distinctly announce, however, that advertisements of a non-ethical character will not be admitted.' "

"In Summertime, Down by the Sea."—This is the title of a new and magnificent song and chorus, written by Alfred J. Doyle, with a remarkable pretty waltz chorus. This song will surely be admired by everybody.

In Summertime, down by the sea,
The only real place, boys, for me,
Take a ride on a trolley, get there before dark,
Take your sweetheart to Dreamland or to Luna Park
In Summertime, down by the sea,
The place where we all like to be;
Where the breeze softly blows,
And where every one goes,
In Summertime, down by the sea.

Price, 50 cents per copy. For sale at all Music Stores.

Archives of the Roentgen Ray and allied Phenomena has taken the place of the Archives of Skiagraphy. The new publication is quarto in form and gotten up in true *de luxe* fashion. The illustrations are much above the average and the *Archives* are destined to easily take first place in its particular sphere. The editors are J. Hall-Edwards, L.R.C.P., Edin., F.R.P.S., and Clarence A. Wright, F.R.C.S. Edin., F.F., P.S.G. for Great Britain; American Editor, Henry G. Piffard, M.D., LL.D. The Rebmanns are Publishers. Rebman Co., 10 West 23d street, New York, is the American publisher. The subscription price of the *Archives* is \$4.00 a year in advance. This is a publication which will certainly meet with immediate favor at the hands of those not acquainted with it.

The Cancer Hospital for Philadelphia.—Application has been made at Philadelphia for a charter for the American Oncologic Hospital, for the treatment of cancer. Two sites for the new hospital are in view, to be bought or rented as soon as the charter has been granted. Among the incorporators are Drs. J. Solis-Cohen, Addinell Hewson, Boardman Reed, G. Betton Massey, B. K. Wilbur, Howard R. Swayne, and C. M. Desvernine.—*Ex.*

MELANGE.

The Fourth Pan-American Medical Congress, which was to have met the latter part of December of this year at Panama, has been postponed until January. This was done at the request of many who proposed to attend, and desired to be at home for Christmas.

The delegates from this side of the continent will leave on Tuesday, December 27, if they go down from New York by the regular Pacific Mail Lines, or at other dates if they go by way of New Orleans or Jamaica. The dates of sailing from the Pacific Coast have not yet been ascertained. The Congress will be held from January 4 to 7.

President Amador of the Republic of Panama has appointed the following officers: Dr. Julio Ycaza, Pres.; Dr. Manuel Coroalles, Vice-Pres.; Dr. Jose E. Calvo, Sec'y; Dr. Pedro de Obarrio, Treas.; Drs. J. W. Ross, J. Tomaselli and M. Gasteazoro, Committee-men.

There will be but four sections: Surgery, Medicine, Hygiene and the Specialties. Surgical Section: Major Louis LeGarde, Pres.; E. B. Barrick, Sec'y. Medical Section: Dr. Moritz Stern, Pres.; Dr. Daniel R. Oduber, Sec'y. Section on Hygiene: Col. W. C. Gorgas, Pres.; Henry E. Carter, Sec'y. Section on Specialties: Dr. W. Spratling, Pres.; Dr. Charles A. Cooke, Sec'y.—*N. O. Med. and Surg. Jour.*

Chinese Medical Jurisprudence.—At the close of the Sung dynasty of China, about 1200 A.D., there was published a curious medical jurisprudence which is interesting despite its manifold absurdities, as still being (Giles' "Chinese Literature") the recognized handbook for official use. No Chinese magistrate ever thinks of proceeding to act as coroner without these instructions. The work was compiled by a judge named Sung Tz'u from pre-existing works of a similar kind. The preface of a fine edition, dated 1842, states that "being subjected for many generations to practical tests by the officers of the Board of Punishments, it became more and more exact."

A few extracts will suffice to show its value: "Man has 365 bones, corresponding to the number of days it takes the heavens to revolve. The skull of a male from the nape of the neck to

the top of the head consists of eight pieces; that of a Ts'aichouman, nine. There is a horizontal suture across the back of the skull and a perpendicular one down the middle. Female skulls are of six pieces, and have the horizontal suture. Teeth are 24, 28, 32, or 36 in number. There are three long-shaped breast bones. There is one bone belonging to the heart of the shape and size of a cask. There is one 'shoulder-well' bone and one 'rice-spoon' bone on each side. Males have 12 ribs on each side—eight long and four short; females have 14 on each side.

"Wounds inflicted on the bone leave a red mark and a slight appearance of saturation, and where the bone is broken there will be at each end a halo-like trace of blood. Take a bone on which there are marks of a wound, and hold it up to the light. If these are of a fresh-looking red, the wound was inflicted before death and penetrated to the bone; but if there is no trace of saturation from blood, although there is a wound, it was inflicted after death.

"The bones of parents may be identified by their children in the following manner: Let the experimenter cut himself or herself with a knife, and cause the blood to drip on to the bones; then if the relationship is an actual fact the blood will sink into the bones, otherwise it will not.

"N. B.—Should the bone have been washed with salt water, even though the relationship exists, yet the blood will not sink in. This is a trick to be guarded against beforehand.

"It is also said that if parent and child, or husband and wife, each cut themselves and let the blood drip into a basin of water, the two bloods will mix, whereas that of two people not thus related will not mix. Where two brothers who have been separated since childhood are desirous of establishing their identity as such, but are unable to do so by ordinary means, let each one cut himself and let the blood drip into a basin. If they are really brothers, the two bloods will coagulate with the aid of a little salt or vinegar. People often smear the basin over with these to attain their own ends and deceive others. Therefore, always wash out the basin you are going to use or buy a new one from the shop. Thus the trick will be defeated.

"There are some atrocious villains who, when they have murdered anyone, burn the body and throw the ashes away, so that there are no bones to examine. In such cases you must carefully find out at what time the murder was committed and where the body was burned. Then, when you know the place, all witnesses agreeing on this point, you may proceed without further delay to examine the wounds. The mode of procedure is this: Put up your shed near where the body was burnt, and make the accused and the witnesses point out themselves the exact spot; then cut down the grass and weeds growing on this spot, burn large quantities of fuel till the place is extremely hot, then throw several pecks of hempseed thereon. By and by brush the place clean; then, if the body was actually burnt on this spot, the oil from the seed will have been found to have sunk into the ground in the form of a human figure, and wherever there were wounds on the dead man, there on this figure the oil will be found to have collected together—large or small, square, round, long, short, oblique or straight, exactly as they were inflicted. The parts where there were no wounds will be free from any such appearances."

The errors of this Chinese medical jurisprudence are such as naturally arise from codification of the dicta of judges who, like Bacon and the Lord Chancellors, evolve science from an internal consciousness, but too often the product of an imperfect early education in science, particularly medicine. Bacon was anticipated in use of the inductive method by Hippocrates, Democritus, Avicenna, and the Arabs; Paracelsus, who advocated the very principles of Bacon; Vesalius, Fallopius, Eustachius, Servetus, Plempius of Louvain, and Harvey. The last, Bacon's contemporary (born in 1687 and died in 1683), was foremost in the science of the time and skilled in the inductive method.—*Medicine.*

The Potassium-Permanganate-Oxalic Acid Fetish.—Dr. Charles Harrington in a paper, "Some Studies in Asepsis," read before the American Surgical Association, at St. Louis, June 14, 1904, made the following statement:

The preparation of the hands for surgical work is a subject that has interested me greatly. The potassium-permanganate-oxalic acid portion of the process has always excited my wonder. Three explanations have been given me of the

necessity or advisability of this treatment, namely: (1) That the permanganate destroys bacteria; (2) That it oxidizes the organic matters adherent to the skin; (3) That when one stains the hands in every part with permanganate and then removes the stain with oxalic acid, the hands are clean. As to the assertion that it destroys bacteria: I have experimented with saturated permanganate solution against *Staphylococcus aureus* and *albus*, *B. coli* and *B. pyocyaneus*, and have found that ten minutes' exposure is ineffective against all but the last mentioned. These results, which were obtained not once, but several times, are shown in the following table in which the plus sign indicates growth, and the minus sign sterility:

TIME (MINUTES)	AUREUS	ALBUS	COLON	PYOCYANEUS
1	Plus	Plus	Plus	Plus
1½	Plus	Plus	Plus	Plus
2	Plus	Plus	Plus	Plus
2½	Plus	Plus	Plus	Plus
3	Plus	Plus	Plus	Plus
4	Plus	Plus	Plus	Plus
5	Plus	Plus	Plus	Plus
10	Plus	Plus	Plus	Minus
15	Minus	Minus	Minus	Minus

As to the oxidation of organic matter: Potassium permanganate is pre-eminently an oxidizer of organic matter. On dipping the hands into a saturated solution, they are stained a deep brown, owing to the precipitation of a lower oxide, oxygen having been given up to the epidermal scales and other organic matter. This deposit of the lower oxide is soluble in oxalic acid, which thus restores the normal color of the hands. It is assumed that the organic matter (just what harm it will do, unless it is in the form of bacteria, I do not know) is completely oxidized and disposed of. Dip the hands, however, a second time, and see what happens. The same thing. Repeat it; again it happens; and again, and again, and again. This is due to the fact that, immediately on contact with organic matter, the permanganate is reduced, and the hands become, as it were, *plated* with the depreciated lower oxide, which acts as a bar to further action of the permanganate upon the parts immediately beneath the plating, just as the albuminate of mercury prevents the further action of corrosive sublimate. A short time ago I tried the experiment on treating my hands first with permanganate and then with oxalic

acid and repeating the process until further treatment failed to give the characteristic brown stain. On the twenty-first trial, the stain was observed to be less intense, and so on to the twenty-fifth, when the experiment was discontinued. From this it would appear that to oxidize all the organic matter possible by this means is an endless task. After twenty-five treatments I washed my hands with soap and water, and after repeated rinsing in running water I dipped them again into the permanganate solution. At once the original dark brown stain appeared as intensely as ever; I was then oxidizing the traces of soap, which, in spite of the continued rinsing, adhered tenaciously to the skin, as is proved by the great difficulty one observes in removing, by rinsing, the odor of a scented soap after washing therewith.

As to the statement that a hand once stained and decolorized is necessarily clean, there is but little to say. A dirty hand may be stained and decolorized as well as a clean one, but the dirt remains. Permanganate removes no dirt and destroys only weakly resistant bacteria.

This is certainly a very interesting matter to surgeons and is worthy of further investigation at their hands. If the statements made by Dr. Harrington are confirmed, let us simply go back to soap as a germicide as well as detergent.

Power of Executive Officer to Employ Physician.—The Court of Appeals at St. Louis, Mo., says that the case of Hasler vs. The Ozark Land and Lumber Company was brought to recover a balance of \$135 for professional services rendered in medical attendance on and treatment of two employes of the company, during their affliction with the smallpox. But it holds that the case did not fall within the well-established rule sought to be invoked by the company, that unless such relation exists between the party requesting a physician to render professional services, and the patient, as raises a legal obligation on his part to call in a physician and pay for his services, the law will not create by implication a promise to pay the reasonable value of the services thereafter performed, and such relation can not be claimed to exist between employer and employe. The testimony in this case disclosed that the physician had declined attendance on the employes until the vice-president and general manager of their employer had directed

him to render the services, and agreed to pay therefor. The evidence also showed that the physician had received \$40, which he claimed was in part payment, but which the company claimed was a personal loan by the official advancing it, though it was conceded to have been paid from the company's funds, and without any acknowledgement or obligation therefor given back by the physician. The testimony of the physician, the court holds, entitled him to have submitted to the jury the issue of his employment by the company to render the services performed; and it affirms a judgment in his favor. It also holds that an instruction that the jury might presume that the executive officer of a business corporation, at once its vice-president and general manager, had authority to make the contract on behalf of the company to which the physician testified, under the conditions presented by the record, was proper. The case was one essentially for the determination of a jury.—*Jour. A. M. A.*

Salicylate of Soda in the Treatment of Graves' Disease.—

The treatment of exophthalmic goitre is still so uncertain and, in a certain proportion of cases, so unsatisfactory that any suggestion which holds out a promise of obtaining greater command over the morbid manifestations associated with this disease is welcome. As long ago as 1895 the value of salicylate of sodium, in doses of not less than a drachm in the twenty-four hours, was pointed out by Dr. Chibret, of Clermont-Ferrand, and quite recently the drug has been rediscovered by Dr. C. G. Chaddock, of St. Louis, U. S. A., who has placed on record a series of observations in which recovery followed this method of treatment. In discussing the value of any method of treating Graves' disease we are confronted by the difficulty that the disease is one which is very erratic in its course, often subsiding spontaneously for a period, under the influence of mere rest and freedom from worry. Moreover, in many of the recorded cases other therapeutical measures were adopted at the same time, more particularly the use of electricity, which is generally recognized to exert a very potent influence in these cases. It is perhaps idle to hope for a really scientific plan of combating this grave affection in the absence of a better knowledge of its etiology and pathology. It is indeed a mat-

ter for surprise in the light of our present knowledge that the mechanism of its production should still be enveloped in so much mystery, an obscurity which is reflected in the variety of the methods of treatment still employed.—*Med. Press and Circular*.

Penalties for Charlatans' Advertising in Germany.—The editor of the advertising portion of the Breslau *General-Anzeiger* was warned by the authorities in regard to the fraudulent character of the ads of a certain charlatan named Malisius, who claimed to cure all diseases. He continued to print the ads and has recently been condemned by the Breslau courts to a fine of 3050 marks, about \$765. The court stated that the editor in publishing the advertisement was more culpable than the charlatan, as if the papers did not aid the quack he would not become so well known. Malisius himself was condemned on 22 counts of accomplished and nine of attempted fraud, to a fine of 1500 marks, or \$375, and eighteen months' imprisonment. A woman at Eberfeld has also been fined \$40 because she advertised that she treated gynecologic affections, kidney and bladder troubles, gout, etc., "according to the latest scientific methods and researches," but was compelled to confess that she had not the slightest knowledge of recent scientific research.—*Jour. A. M. A.*

Tuberculous Antitoxin Per Os.—Following up the work of Italo, who obtained a certain increase in the antitoxic power of the blood-serum of patients by administering to them tuberculous antitoxin by mouth, F. Fizari (Gazz. Osped., June 14, 1903) sought to determine whether the formed elements of the blood of animals immunized to tuberculosis were endowed with antitoxic properties and whether such elements given by mouth could impart resistance to tuberculous toxins. To this end, the clot of blood taken from immunized horses and cows was dried and reduced to powder, and 3 gm. daily administered to rabbits. The agglutinating power of the rabbits' serum was tested before and after a course of treatment with the powder, with the result that a marked increase in agglutinating power was seen after the treatment. As to the increase in antitoxic power, the following results are recorded: After eighty-five days' treatment, the rabbits were injected

with mortal doses of tuberculin. Half the animals subjected to such injections lived for thirty-six hours while the control animals survived but twelve to sixteen hours. The remaining number survived and were in good health at the time of writing.—*Medical News*.

Subdiaphragmatic Abscess of the Liver.—A method by which posterosuperior abscess of the liver may be reached and surgically treated without risk of contamination of the pleural or peritoneal cavities has been devised by P. Mendes (*Rev. de Chir.*, June 10, 1903). He describes the operation as follows: The patient being placed upon the left side, an incision 12 mm. long was made along the ninth rib, starting from its junction with the cartilage. Two incisions, having their origin at the seventh intercostal space, were made to meet the two extremities of the first. The flap thus made was dissected and laid back, the eighth and ninth ribs laid bare, denuded of their periosteum and resected (the former to the extent of 8 cm., the latter 10 cm.) without injury to the pleura. With the finger, the parietal layer of the pleura was then stripped from the ribs below the incision as far as its reflection upon the diaphragm. Then, raising, as far as possible, the cul-de-sac of the pleura, an incision was made in the diaphragm which gave egress to 423 gm. of pus. Two large drains were then inserted in the wound, these being removed upon the ninth day; and the wound was completely closed within a month. The author gives to his method the name parapleural transdiaphragmatic.—*Medical News*.

The Etiology of Leukemia.—John Benjamin Nichols concludes that: Heredity, traumatism, and precedent disease conditions in a few cases may have some causative influence, but are of no more than subsidiary etiological moment. Almost nothing is known as to the specific primary cause of leukemia. Aside from a nervous origin of the disease which has been suggested, the possible explanations seem to be limited to three. That it is due to a vice in the internal processes of cell life and division that comes into generalized activity, and results in exaggerated leucocytic hyperplasia; that it is the result of the action of toxic substances, autogenous or exogenous, generated at some unknown place in some unknown way; and, that it is

of infectious or parasitic origin, the parasites acting by the production of toxins or otherwise. Of these only the infectious theory has been at all subjected to direct investigation. In the failure of proof of the infectiousness of leukemia, the explanation of its causation would appear to lie between the toxic and the hyperplastic theory, with the propabilities, perhaps, in favor of the former.—*Medical Record*.

A Xiphosternal Crunching Sound.—Myer Solis-Cohen has observed this sound in six patients out of 492 cases, or one and one-fifth per cent. This sound is superficial, and may be compared to the sound of a boot treading on soft snow. It is heard over the lower end of the sternum and a little to the left of it. The exact area varies, as well as the intensity, and occasionally slightly, the position, but never the character. It is not influenced by exercise, respiration or pressure. In every case the heart was enlarged and the cardiac sounds were weak and of poor quality. Retraction of the interspaces was noted in three cases. The pulse averaged about 82. The blood count was normal, practically, the hemoglobin about 85 per cent. The sputum was negative. The cause of this sound can only be conjectured till more work has been done on the subject.—*Medical Record*.

Removal of the Internal Jugular Vein and Carotid Arteries in Order to Remove a Tumor in the Left Side of the Neck.—The patient of N. McPhatter was a woman of thirty-one years, with a tumor (nature not stated) on the left side of the neck which, as the operation revealed, surrounded the carotid arteries, internal jugular vein, and pneumogastric nerve, apparently penetrating their walls. The author describes the general anatomy of the vessels and nerves of this region and then details the various steps of the operation. In spite of the dangerous region to which the operation was confined and the radical nature of the latter, the patient made an uneventful recovery, and in two weeks was well. A colored plate accompanies the paper and well illustrates the anatomical features of the case.—*Medical Record*.

MISCELLANEOUS NOTES.

Reaping Ptomaines.—A great many people seem to think that it matters little what kind of material goes into the building of the human structure!

They feed on thorns and expect to pick roses!

Later, they find they have sown indigestion and are reaping ptomaines.

It's a wonderful laboratory, this human body. But it can't prevent the formation of deadly poisons within its very being.

Indeed, the alimentary tract may be regarded as one great laboratory for the manufacture of dangerous substances. "Biliousness" is a forcible illustration of the formation and the absorption of poisons, due largely to an excessive proteid diet. The nervous symptoms of the dyspeptic are often but the physiological demonstrations of putrefactive alkaloids.

Appreciating the importance of the command, "Keep the Bowels Open," particularly in the colds so easily taken at this time of the year, coryza, influenza and allied conditions, Dr. L. P. Hammond of Rome, Ga., recommends "Laxative Antikamnia & Quinine Tablets," the laxative dose of which is two tablets, every two or three hours, as indicated. When a cathartic is desired, administer the tablets as directed and follow with a saline draught the next morning before breakfast. This will hasten peristaltic action and assist in removing, at once, the accumulated fecal matter.

Sanmetto in Cystitis, Urethritis and in Inflammation of Bladder Neck, also in Impotency.—My experience with Sanmetto has been most satisfactory, from the fact that I have been enabled to get favorable results with my patients. I have used in a variety of cases during the last ten years, as cystitis, urethritis and inflammation of neck of bladder. As a remedy in impotency I know of nothing of superior efficacy. I do not keep a clinical record of my cases, so am unable to give reports in full detail. I can, however, heartily recommend Sanmetto to the medical profession as a remedy that has no superior where indicated, if faithfully used by the afflicted. F. M. Abbett, M. D., Indianapolis, Ind.

A New Departure.—In these days when a gullible public prescribes for itself from the patent medicines on the frieze of the trolley-cars, or takes the profitable substitution that the druggist passes over the counter, it is no wonder that physicians feel a bit out of sympathy with the vendors of drugs, and make unfavorable comparisons between the commercialism of the men who supply medicines and the science of the medical profession that prescribes them.

But we should never forget that were it not for the great manufacturers and importers of drugs we might still cull our own herbs, and use our own mortars and pestles. As an indication of the aid that such houses may be to physicians, we call attention to the colored plates of pathogenic organisms that have been prepared for the profession by the house of M. J. Breitenbach Co., the importers of Gude's pepto-mangan.

No text-book and no one work on pathogenic bacteria contains such a number of excellent diagnostic illustrations, nor such beautiful examples of lithographic art, as these.

Many physicians are too far from libraries and laboratories to be able to put into practice the training of their college days. They need just such a set of reference plates to be able to make microscopical examinations. The recognition of this need and the care that has been taken to fill it shows a spirit of enterprise in this firm that we wish might serve as an example to others. For if, instead of advertising to the public, the manufacturers of drugs would make such valuable contributions to science as lies in their power, there might be more sympathy between them and physicians.

The full set of sixty cuts has been prepared to send to any physician who writes for them, from the firm of M. J. Breitenbach Co., New York.—Editorial from *Medical News*, New York, July 18th, 1903.

Dermapurine in Skin Diseases.— I like Dermapurine very much—gave good results. J. B. Miner, M.D.

We shall continue our good words, as your Dermapurine Soap pleases us more than any other we have tried, and we have tried many. Success to you. Vigorously yours, Edward B. Warman.—Editor of the Health Department of the *Ladies' Home Journal*; Author of *Scientific Physical Training*, *The Voice*, *Philosophy of Expression*, etc.

I find Dermapurine an excellent remedy for scalp troubles; in fact, the best I have ever used. Also good for Eczema. I expect to use it in the future. J. M. J. Manning, M.D., Almo, Ky.

A Corrector of Iodism.—Dr. W. H. Morse reports (*Southern Clinic* for May) success in the use of bromidia, which he says has proved corrigental of iodia. Discussing his results he says: Vomiting is so frequent and troublesome a symptom in many diseases besides irritation and inflammation of the stomach, as to demand much prac-

tical attention from the physician. So, although the causes are so various, and although we are actually treating a symptom, for this symptom bromidia is remarkably effectual. We have all employed the remedy for colic and hysteria, two disorders where nausea and vomiting are as pronounced as they are persistent, and almost the first evidence of relief is shown by the disappearance of these disagreeable symptoms. It is quite as efficacious for the nausea and vomiting from ulcer or cancer of the stomach. There is nothing that will more quickly check the vomiting, and the hypnotic effect is quite in order.

When To Operate In Appendicitis.—Now or later? That is the question. While undecided use Antiphlogistine. Spread warm and thick over the abdomen and cover with absorbent cotton and a suitable compress. When used early the inflammation is often resolved, the attack is cut short and operation becomes unnecessary. The dressing should be renewed, when it can be easily peeled off, generally in 12 to 24 hours.

Listerine Dermatic Soap.—This is an exceptionally meritorious article which will, we believe, be extensively prescribed by physicians for use in the treatment of diseases of the skin as the antiseptic and detergent properties of Listerine "Dermatic" Soap prove beneficial in the treatment of the various cutaneous inflammations and eruptions, in combating all vegetable and animal parasitic diseases, in diseases of the sudoriparous and sebaceous glands and hair follicles, as well as for the relief of excessive and offensive perspiration.

Kennedy's Extract of *Pinus Canadensis* is a valuable agent in chronic diseases of the mucous membranes, and admirable for the removal of morbid discharges of every kind.

Scientific Work on Coca.—It may be of interest to note that the Mariani products have not been merely pushed upon the market commercially, without any regard to scientific details. In the laboratories at Neuilly, France, the Coca plant is studied botanically and chemically to determine how best to develop its properties. From there thousands of plants have been sent to the principal botanical gardens throughout the world, and every effort is constantly made to study this substance, and to afford others an opportunity for its scientific investigation. This is related not as a matter for mere praise, but to impress the fact that here is the largest manufactory of exclusive Coca preparations in the world. This could not have been so extensive, nor so successfully maintained through all these years, if it was not founded upon merit and conducted upon those liberal principles which unite all that is possible scientifically with mere commercial interest. Thus it will be seen, that whatever has been done toward advancing the popu-

lar use of this restorative substance, has been the outgrowth from the original conception of preserving the true qualities of recent Coca in a nutritive wine.

These are but some reasons why it would seem that whatever this firm has to present to its friends, the practitioners, should command consideration. Vin Mariani was nearly fifty years ago introduced to the medical profession. It has been endorsed by physicians everywhere, and whatever success has been achieved through it is due to those physicians who, having recognized its worth, have since continued to employ it.—*The Coca Leaf*, November, 1902.

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ORIGINAL COMMUNICATIONS.

A CASE OF SKIN AFFECTION SIMULATING SYPHILIS *

BY A. H. OHMANN-DUMESNIL, ST. LOUIS, MO.

There occasionally occur cases of cutaneous eruptions which possess a large amount of interest and are withal in the highest degree instructive. It is not he who has devoted time and study to the subject who will be deceived, but rather the comparatively inexperienced practitioner of medicine and surgery, or the younger member of the medical profession who endeavors to emulate his elders by making a rapid diagnosis which in but too many cases is faulty. The writer has noted this fault more developed with respect to cutaneous affections than any others, this being, in great part, due to the fact that teachers are not sufficiently analytic in their methods of instruction and books on scientific diagnosis do not devote sufficient attention to the proper diagnosis of cutaneous phenomena of a morbid character. This may serve as an apology for the recital of a case which was easily cleared by a very simple method. No doubt every one present here has observed similar cases, but the circumstances in connection with mine probably did not present themselves. And, whilst the entire account may seem somewhat elementary, it possesses sufficient of the instructive to be beneficial to some physicians who may read it, and in any event will contribute to their increasing their carefulness in the examination of a patient and the formulation of a diagnosis.

CASE.—C. M., male, aged 26, single, with no particular

*Half-tones kindly loaned by the *Regular Medical Visitor*.

occupation, was admitted to the St. Louis City Hospital by way of the City Dispensary, the diagnosis being "venereal." Upon admission to the hospital he was placed in division 6,

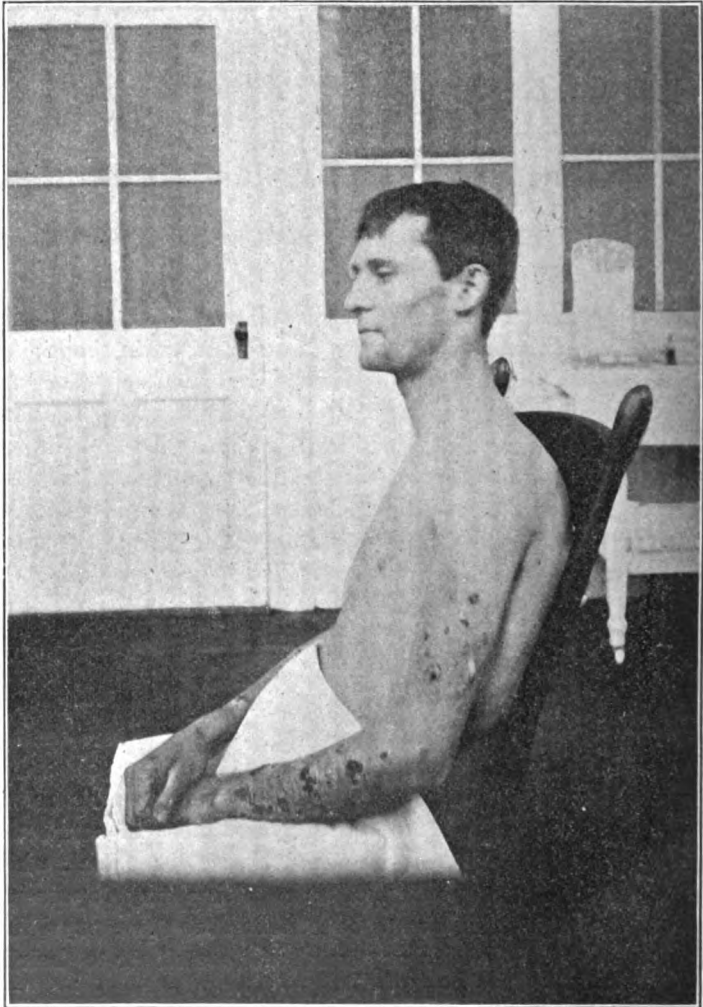


Fig. 1.

to which all cases of venereal diseases are assigned. Forthwith the interne in charge of the division made the diagnosis of syphilis and placed the patient under the routine treatment

for that disease. Some few days after his admission I was requested to see him, as the treatment had not seemed to produce any beneficial results. When I proceeded to examine the patient he had to be handled by an attendant, as he was too weak to sit up or stand, not even being able to turn around in bed. He was very anemic and emaciated. He had been progressively losing strength and could not give coherent answers to questions. On this account no satisfactory history could be elicited. In fact, the entire case had to be judged from the objective symptoms which were presented, and the conclusions to be drawn from these would establish a positive diagnosis as well as point out the correct treatment to follow. The correction of the deductions drawn was proven by the subsequent successful result which followed. An examination of the patient results in the observation of the following form and distribution of the eruption :

The eruption consisted of inflammatory lesions covered with ulcers varying in size from a pin-head to a silver quarter of a dollar. They were pretty numerous and disseminated on the arms and legs, although discrete in distribution. They were located chiefly upon the outer aspects of the limbs (see figs. 1 and 2). The eruption did not exist upon the chest nor on the back. The scalp presented no eruption nor did the dorsa of the hands or feet. The palms and soles were also free of any eruption. The areas about the joints were also free of eruption, as a glance at the figures will show. An denilis could be made out in the groins and axillæ, but it was inflammatory in character, the lymphatic glands being large, softish and painful to the touch, and in no locality did any induration exist such as we find in syphilitic infection. In fact, the case was decided to be non-syphilitic.

The reason of arriving at this conclusion was based upon the peculiar distribution of the eruption. Its absence from the back, face, scalp, palms and soles certainly argued against a syphilitic eruption. The failure of obtaining any effect from specific treatment tended to corroborate this view. The form of the individual lesions and the fact that the appearance presented was distinctly inflammatory was another corroborative point. Microscopic examination of the pus revealed the presence, in large numbers, of the *staphylococcus pyogenes aureus*,

which also was observed in the colonies produced by inoculation of nutrient media. An objective symptom which was of some little interest was the absence of the eruption about the



Fig. 2.

joints. I have seen cases of syphilis in which the eruption seemed to localize itself about the joints, but I have seen none in which other parts were affected and the regions about the

joints escaped. After having satisfactorily demonstrated that the case was not one of syphilis the next question which presented itself was to determine what it was and to what cause it was due. This was done in a very short time and in a satisfactory manner.

In the first place it was learned that the patient was constipated in a marked degree, so much so that it amounted to an obstipation. An examination of the cutaneous sensibility showed it to be marked below the normal. Continuing the examination the pupillary reflex was found to be very sluggish. The circulation was very poor and muscular weakness quite marked. The eruption was evidently an infective dermatitis and there was no tendency for it to disseminate itself. Having seen similar cases, it was a comparatively easy matter to determine that the eruption had been produced by hypodermic injections for which a dirty needle had been used. Upon my recommendation the patient was administered a large morphine injection. The effect was magical. He began to speak in a lucid manner, felt stronger, and gave a clear history of being addicted to the morphine habit. The lesions of the skin were treated antiseptically, he was given a certain allowance of morphine *per os* and improvement became progressive and comparatively rapid. It was not long before he was discharged well of his eruption, but not of his drug habit.

The only excuse which can be given for reporting this case is that it presented some points of interest and, as stated above, shows the necessity of a careful examination as well as the importance of making it a thorough one, thus avoiding the possibility of making an error in diagnosis. The advantage of establishing a correct diagnosis is self-evident as it includes the adoption of a therapeusis which will lead to a satisfactory result. The case also shows how little reliance is to be placed upon the history furnished by a patient when he is physically as well as mentally incapable of furnishing one. I will let my readers draw their conclusions.

THE PHYSICAL SIGNS AND THE SPUTUM OF INCIPIENT PULMONARY TUBERCULOSIS.*

BY ROBERT N. WILSON, M.D., PHILADELPHIA, PA.

The following abstract of two phases of an extended study of fifteen incipient cases of tuberculosis seen in private practice, and of seventy-one more or less advanced cases studied in the wards of the Philadelphia Hospital, is presented in the hope that it may lend a new interest to a hackneyed subject—the importance of a careful examination of patients with apparently trifling conditions.

The experience undergone by the writer, during the last year especially, has forced him to the belief that many cases of incipient phthisis are not only overlooked, but that it is a particularly difficult matter to obtain a confirmation of the diagnosis, when it is made in a truly incipient case.

Of the fifteen cases already mentioned nearly all were seen at some time in consultation with other members of the profession, and in only two instances did the consultant find himself able to agree with the positive or even probable diagnosis. Usually the stumbling-block was the absence of tubercle bacilli from the sputum; sometimes it was the lack of fever; often the physical signs did not appear extensive enough; occasionally some one cherished symptom was absent, and until that was obtained the diagnosis was considered impossible. In one case the patient, without the knowledge of the writer, visited three different consultants in this city after hearing his diagnosis of incipient tuberculosis of the lung. Of these one told her that she had only a bad cold; the second told her that she probably had not tuberculosis; and the third (the head of one of our tuberculosis sanatoria) examined her chest through all her clothing and informed her that she had indeed a healed tubercular lesion.

In many of these cases, it may be well stated, tubercle bacilli were at some time sooner or later found in the sputum. In a number the diagnosis was concurred in by Dr. E. L. Trudeau, to whom the patients were finally sent for treatment; among these was the last case cited. All served to illustrate the reluctance of the medical man of to-day to diagnose tuberculosis in the absence of so-called classical signs.

*Read before the Philadelphia County Medical Society, April 13, 1904.

PATHOLOGIC CHANGES.

The pathologic conditions, whether of the lungs, the bronchi or the glands, in incipient tuberculosis, may be epitomized in the two general terms, *congestion* and *beginning consolidation*.

Probably no one has ever seen under a microscope the earliest changes in a previously healthy lung. The avenue of infection, however, undoubtedly has much to do with the extent of the process at the time when symptoms are prominent enough to suggest an unusually thorough examination. Usually at this time the lesion, while we still rightly term it incipient, has existed for weeks and perhaps months or even years. If the infection takes place through the blood or the lymph-vessels, the first lesion (in adults generally in or near the right apex) is one of slight congestion, due simply and solely to cold, exposure, or exhaustion, or perhaps to a family predisposition, of which we shall say more hereafter. No matter how healthy the patient in appearance when first seen, we may rest assured that there has been some antedating lesion which offered a favorable nidus, first for the infection, then for growth and multiplication of the tubercle bacillus. No doubt the first effect of the bacillus is irritative, the influence being exerted upon the bloodvessels which become overful and distended as in any inflammatory center. The air-vesicles must soon suffer from this congestion, both as the result of pressure, because of obstruction to the venous outflow, and because of the direct influence of the poison elaborated by the bacillus, which is without question invariably present at the site of infection. Often there are isolated areas of pleurisy at the bases or at any possible point over the surface of the lung. Wherever there is such a point of tuberculosis inflammation as the latter, or such as the congested vesicles, there will be collected broken-down and proliferated epithelial cells, bloodcorpuscles and leukocytes. These still further impede the circulation of and around the vesicles, and furnish in themselves a most favorable culture medium for the bacilli.

If the process commences in or near a bronchus it may be confined to the bronchial tube or its immediately adjacent area. Such cases are frequently noted, in which all physical signs fail and in which sometimes the sputum is swarming with tubercle bacilli.

A gradual increase in the deposit of this collection of blood, epithelium and leukocytes forms, little by little, the beginning consolidation which soon demonstrates its presence by means of characteristic physical signs.

There is undoubtedly, and in every case, a time when there are only catarrhal changes present. I have examined many cases which I believe to have been of such a nature, and later in an instance or two have been forced to watch the consolidation develop. In one case a time could be fixed during which the physical signs changed from those of a normal chest to those of an active involvement. Early changes in the glands must also be those of congestion, and immediately thereafter hyperplasia and swelling.

When the lesion has advanced beyond these simple primary conditions the case has already passed out of the category of incipient tuberculosis.

PHYSICAL SIGNS.

It is my firm belief that with the veriest beginning of a superficial pulmonary tubercular process, physical signs are present which may always be detected by a careful and trained observer. It is my equally positive conviction that at the present time in nine cases out of ten the earliest signs are overlooked; and that, therefore, we have passed by the entire number until the symptoms have stared us out of countenance. In the case of a tuberculous process located in the bronchi and the bronchial subdivisions, there are probably no distinctive physical signs. My only excuse for considering such cases here is to emphasize the fact that a patient may indeed suffer from such forms of tuberculosis, and have tubercle bacilli in the sputum, and yet have a symptomless chest. The same statement may be made regarding tuberculosis of the thoracic glands, though at times dulness may be elicited along the spinal gutter, and sometimes an embarrassment of respiration will be noted, which seems to be due to the pressure of a mass upon the respiratory apparatus. It is a not infrequent thing to find, at autopsy, the bronchial glands involved and no other focus of infection.

In considering the physical signs, therefore, of a beginning thoracic tuberculosis, our study is limited, to a great extent,

after all, to the lesions of incipient pulmonary phthisis. The conclusions reached at this time are based, first, upon a series of careful observations made in the cases presented in this paper, all of which were seen in the early stages. None of these has up to the present moment progressed beyond the incipient stage, and all appear to be convalescent, the active signs gradually lessening in number and distinctness. Second, there have been included the results of a study of seventy-one cases of tuberculosis in all stages in the wards of the Philadelphia Hospital. In the latter series the physical signs in the lung econdarily involved (this occurring sooner or later in every case) were observed with particular reference to the nature of the lesion probably present. Lastly have been included, though not mentioned in the statistical report, a number of individual cases of incipient tuberculosis occurring in students of the University of Penneylvania and in several nurses examined at three hospitals.

It is my earnest belief, and one which I see trampled upon every day by our foremost diagnosticians, that there is no one capable of making a thorough and scientific examination of the chest without a complete baring of the skin surface over the part to be examined. I may also say that I have never met with a refusal to expose the skin surface in man, woman or child, after I have explained that only in this way can the examiner be sure of his results, or a trustworthy statement of the condition be ventured. I have seen others pass a patient by with the statement that the lungs were normal, and have myself thought their judgment correct until I proved them and myself wrong after a removal of the clothing. This point is emphasized here because I believe not only that in its observance rests the possibility of the earliest diagnosis of incipient phthisis, but because I am repeatedly seeing cases that have been examined by other men through shirts, dresses or underclothing and sometimes all three. A diagnosis based on such an examination may sometimes be correct and sometimes incorrect, but it is always unwarranted on the premises.

Inspection yields important data, which will be briefly referred to. The general conformation of the face, neck and chest is very important. A thin, pallid subject, with dilated veins, with deep fossæ above and below the clavicles, with

winged scapulæ (a so-called phthisinoid chest) and little or no pulmonary expansion, invites the diagnosis of phthisis and often thus invites a positive error. None the less the picture is suggestive, and the further examination often shows, sooner or later, if not at once, characteristic signs of the disease. Cold hands and feet (also often cyanotic), clubbed fingers (more often seen in advanced processes), mouth breathing, a rapid apex beat, and sometimes nodular swellings in the cervical region, all are landmarks, and all add to the probability of present or future tuberculous involvement of some nature. Sometimes a subject appears to the casual observer to be in the bloom of health, with no abnormal physical signs obvious to inspection. Such a case may be still tuberculous. Let me say, however, that when such cases are indeed tuberculous they always present physical signs suggestive at least to careful inspection. With very few exceptions the series of cases presented in this study appeared thoroughly healthy to the eyes of the friends and sometimes of their families.

When a difference can be noted between the pulmonary chest areas (right and left), we have at once a more positive object for our attention. Mensuration will confirm the suspicion suggested by the eye. The expansion over an abnormal lobe is never as free as over the healthy side. The apical swelling on deep inspiration is seldom as full. Exceedingly often there is a depression above or below (or both) one clavicle only. The difference between the supra and infraclavicular fossæ of the two sides becomes more certain during a full inspiration, and the play of the diaphragm (often evident to the eye) is usually less on the affected side. This test may be confirmed by the fluoroscope. Sometimes a depression may represent a retraction of the chest wall at that point; but much more often it is a sign of some condition which prevents inflation of the lung. This condition is frequently enough a tuberculous process to render it a sign of value in the diagnosis of tuberculous disease. Sometimes, as already noted, nearly all of these signs are absent, and there seems to be next to no abnormality evident to the eye. Let me again say here, however, that I have never seen a case of incipient phthisis without a clamminess and bluish color of the hands that invites attention; and that I have never seen a case of apical involvement in which, after

three or four active forced respirations, the abnormal apex did not fail to expand equally with its more normal fellow, and in such a way as to render the difference in the motion of the two halves of the chest evident to the eye. A localized decrease in expansion suggests at once a circumscribed involvement of the lung or pleura. Neither of these signs is pathognomonic of pulmonary phthisis; both suggest a careful study of both lungs from the apex to the base. In no branch of physical diagnosis is a careful comparison of the two sides at every point so imperative, nor so often omitted. Careful inspection is impossible through clothing of any description whatsoever.

Palpation confirms the difference in expansile power between the two chests, and if the sense of touch is delicate it affords even more positive results than does the eye. Only when the two sides are compared is the procedure of any value.

The cyanosis of the extremities has already been noted under inspection, and the lack of circulation is again determined by the touch of the examiner.

Sometimes a difference can be noted in the transmission of the vocal fremitus to the hand (tactile fremitus) on the two sides. The degree of difference depends entirely upon the extent to which consolidation has progressed, and in the earliest stages is not to be detected. As the air-vesicles gradually fill, the fremitus over the affected area becomes relatively more and more distinct, until there is no mistaking the pathologic character of the sign. It must always be remembered that the right upper lobe, and sometimes the entire right lung, normally yields a more distinct fremitus than the left. During the stage of moist congestion, just as in some pneumonias, the fremitus becomes less evident, to become more marked again as true consolidation begins. When a pathologic involvement is suspected on the right side, care is required not to confuse the normal relative difference with a pathologic intensification of the fremitus. When the fremitus is more distinct on the left side, there is no mistaking the suggestiveness of the occurrence, unless the patient be left-handed. In the latter event the over-development of the left side will vitiate the value of the increase in intensity.

Palpation also is of little value in the early stages of pulmonary phthisis, unless the hand can act upon the bare skin, by

way of confirming, and often in conjunction and synchronously with the eye.

Percussion, if rightly employed, often renders valuable aid in detecting incipient pulmonary changes. If carelessly or unintelligently used it is very disappointing. As already stated, I have myself obtained much more satisfactory results in the use of both finger percussion and of a plexor and ivory pleximeter, the sharp note of the latter often giving definite information when the blunt finger note has failed. DaCosta's method of percussing the apices during a held, forced inspiration, and then, after a rest, during forced expiration, often yields differential results that cannot be obtained during ordinary respiratory conditions. Again, a careful comparison of the note obtained in identical positions on the two chests is absolutely necessary in the use of the ivory pleximeter. The latter must not only be held in the same relative position, but the blow should be of as nearly similar force as possible. Often there is a difference only in the pitch of the note, both the finger and the ivory yielding a higher pitch over the area of involvement. In the earliest incipency absolutely no difference can be detected. Only seldom can the finger detect early differences in the resistance of the tissues. Long before there is present on either side, however, the note that is ordinarily considered characteristic of a consolidation there can be detected by the careful ear a difference between the note on the two sides.

Once more, on the right side (in a left-handed person the left side) the normal note is slightly fuller and lower in pitch than at the same point (all conditions being the same, such as underlying organs, etc.), on the left chest. As soon as the air-vesicles begin to fill with a semifluid and then with semisolid and solid deposits, the pitch of the note obtained thereover becomes higher, and the resonance more and more impaired. It seems hardly necessary to state that only a very clumsy percussion is possible through clothing of any thickness, and careful percussion is only possible over the bare skin.

Auscultation, after all, must be largely depended upon to render the diagnosis possible. Inspection, palpation and percussion may all suggest a beginning tuberculous process in the lungs, but if auscultation fails to confirm their evidence it must be set aside. Many women, for instance, have poorly devel-

oped right or left chests, fewer men by far. Many as a consequence present signs suggestive, on inspection and palpation and percussion, of curtailed pulmonary motion and space. Fortunately, however, there are signs very early evident to the careful ear in every case of incipient pulmonary tuberculosis; and these signs, whenever found in a chest, are at once suggestive, and when in association with other signs and a suspicious clinical history, are often absolutely conclusive. Only two conditions, to my knowledge, simulate the early auscultatory signs of pulmonary tuberculosis, viz.: influenza and syphilis. When these can be excluded, a positive diagnosis of tuberculosis can be made.

Again it is necessary to say that for satisfactory and accurate results the chest must be bare and the ear trained and acute.

Probably the first change that is noted is a harshness of the inspiratory sound, as compared with that of the well side, or still better, of any normal portion of the lung. Normal respiratory sounds, we have already said, are always soft. As soon as this softness of the breath sounds disappears, pathologic involvement must be suspected. The next suspicious change consists in a lengthening of the expiratory sound, at first very slight, but later such as to render it even longer at times than the sound of inspiration. The personal equation is vital here, but there is no one surely who cannot train his ear (provided he has an ear) to detect the lengthening of the expiratory sound, when it becomes nearly or quite equal in length to that of inspiration. As the vesicles begin to fill, and breathing is attempted throughout the involved area more and more through the bronchial subdivisions and less and less through the vesicles, first the expiratory and soon the inspiratory sound becomes tubular in character. It may very early be even distinctly tubular, provided the process is a rapid one. This change in the breath sounds is as a rule to be noted first posteriorly over the apex of the lung, near the inner angle of the scapula; only later it is heard anteriorly and below the clavicle. In occasional instances this order of appearance is transposed, and the change is first heard anteriorly. It may indeed occur first at any point over the pulmonary surface. *It must not be confounded with the breath sounds which are normally tubular in a small number of chests; nor with those heard normally*

over the superficial bronchi. The tubular breathing of incipient phthisis is heard only over the small area of involvement; it is never transmitted to any considerable distance; it is often detected only upon comparison of the two sides of the chest.

As soon as consolidation has taken place, the sound of the spoken voice is transmitted with great distinctness to the ear. Especially the whispered speech is carried with vividness in the entire absence of a cavity. This sign is of double value when the two sides of the chest are compared, as it is never presented by normal tissues. Moreover, it is never simulated over the apex of the lung by any other than a pathologic condition. I have recently observed it in an incipient case which, up to the present time, has been troubled neither with cough nor with expectoration.

Still more important than the foregoing, which may sometimes mark a healed pulmonary lesion, and very suggestive, will be the discovery of fine hair-crackling rales. These are often obtainable only after a cough, are usually heard first posteriorly over the extreme apex, or along the spine of the scapula. Sometimes I have found them only in the axillary space, high up in the armpit. Such rales, when syphilis and influenza can be excluded, offer in most cases the first positive signs of phthisis. If these fine rales, which will never be forgotten when once heard, and resemble closely those of an early croupous pneumonia, occur on only one side of the chest, and over a small area, the exclusion of syphilis and influenza becomes more and more possible. Usually also the rales of an influenzal pneumonic patch are larger and less crepitant. There is no more characteristic sign of incipient pulmonary phthisis than these localized fine rales, and to one who has seen many cases of early tubercular change, they are a dread omen of a long course of treatment and only a probable cure. Often a gentle friction rub accompanies these and sometimes is heard alone.

A phenomenon has recently been described by Cybulski and favorably commented upon by Remouchamps, which is also sometimes evident to the ear, and is caused by the same fine crepitant rales. I refer to a fine crepitation, described by Cybulski as similar to the scratching of a pen, and heard usu-

ally at the end of inspiration, with the listener's ear held close before the patient's open mouth. I have studied this so-called laryngeal crepitation in many cases. I have been able to obtain it in some incipient conditions, but have failed in the greater number. It appears to be present in many of the more advanced cases which show fairly loud crepitant rales near the bifurcation of the trachea; but is certainly not even a fairly constant sign of the early tuberculous changes.

Attention may also be called to the fact that the heart sounds become plainer over an area of consolidation and that this fact may aid in locating the lesion in an obscure case.

In commenting on the physical signs as discussed, I would say merely that they are first found in adults, as a rule, posteriorly over or near the pulmonary apex, usually the right. In children they are more frequently detected over the root of one lung, again usually on the right side. In both adults and children they may appear at any point over the pulmonary surface. I would again emphasize a cough as an important influence in rendering audible otherwise latent signs. Many incipient cases present few indications, no case presents none. Even to the dull ear, after a time, there will remain no doubt that something is wrong within.

THE SPUTUM.

Sputum may or may not be in evidence in the incipient case of tuberculosis of the lungs. In my series of cases eleven expectorated constantly a free secretion of mucopus. Three had no sputum except at times when ordinary "colds" were contracted. One had simply a postpharyngeal mucus which could never be obtained for examination. In the bronchial form of the disease the sputum is probably always profuse, and almost from the beginning. In one case it was rarely obtainable even in the smallest quantities, and then only at rare intervals. In another case considerable quantities of pus and blood were expectorated over a space of more than two years, and yet the pulmonary process had advanced so slowly as to cause a doubt in the mind of more than one student of his case as to the exact condition present. Usually the sputum resembles in all respects the yellow mucopus of a coryza or a simple bronchitis. More rarely it is streaked with blood. Usually it contains

many colonies of diplococci and often staphylococci or streptococci, or all three. I always look upon the occurrence of tetragen in the sputum as an incentive to examine more thoroughly for tubercle bacilli; the association is very frequent. Sometimes tubercle bacilli may be found. The most that can be said for the sputum of incipient pulmonary tuberculosis is that it is absolutely atypical unless it contain tubercle bacilli. It should be examined, and repeatedly as soon as there is sputum to examine. Elastic tissue is probably never to be found in the incipient case, and need hardly be anticipated. The sputum examined should be certainly that which comes from the chest cavity, and not that which so often drops back and down from the nasopharynx during the night. The patient should be asked to secure that which is coughed up first in the morning after rising, and not the first clearing of the throat. If this rule be followed much more frequently will definite results be obtained.

THE SIGNIFICANCE OF TUBERCLE BACILLI IN THE SPUTUM.

A much mooted point is the significance of the bacilli in the sputum, and still more doubtful appears to be the import of their complete absence. In one case the diagnosis was first postponed because bacilli could not be found; it was denied by the next consultant in spite of their positive presence; it was deemed improbable by the next because they had been found only occasionally, and the last consultant presumably attached no importance to either their presence or absence. In the first place I would say that I have seen exceedingly few cases of pulmonary tuberculosis in which tubercle bacilli have not been found sooner or later, provided sputum has been present and if the search has been frequent and persistent. Such cases undoubtedly do occur, and there are several included in my series. I have seen many cases in which the sputum was examined in an incomplete and unscientific manner with a negative result; and yet the bacilli were demonstrated by a more systematic procedure from the same specimen. Many such cases will reveal the fact that one or two or three specimens have been examined, often only one smear from each, and often in a manner far from thorough. If it is worth our while to make the diagnosis it is highly important that we prove our ground. In one case nearly one hundred specimens were

stained and examined. In the twenty-first and twenty-second of my own preparations, in only one of a series studied by another examiner, and in none of a long series prepared by a third, were tubercle bacilli found. In nearly every case of the series many specimens of sputum showed not a single tubercle bacillus. In the majority a few bacilli were found sooner or later. In one case no bacilli could be found on one occasion, and then weeks later the sputum was swarming with them. In another case no sputum could be obtained; and in still another, though the sputum was profuse and constantly streaked with blood, not one tubercle bacillus could ever be discovered. The latter patient left for the West before an exhaustive study of the sputum could be carried out.

These facts based on actual cases, together with many interesting experiences in the examination of sputum for other observers in the past, have lead me to formulate the following conclusions:

- (1) Only repeated and systematic examinations of the sputum constitute a careful and conclusive study. A failure to find tubercle bacilli in one specimen has practically no significance.
- (2) Only fresh sputum is likely to yield bacilli when they occur in small numbers. My experience in this regard is contrary to the usual statement, but is based on many cases and special study of the point in question.
- (3) Bacilli, though actively at work in the pulmonary tissues, may be found in no other portion of the sputum than the so-called "caseous bodies," and may not be found in these.
- (4) Tubercle bacilli may be only intermittently present in the sputum of a tuberculous patient. The search, often otherwise unsuccessful, may be rewarded after centrifugating the sputum and examining the precipitated particles.
- (5) If no bacilli can be detected by the ordinary methods inoculation experiments may prove their presence. Inoculation experiments must be repeated more than once before the absence of bacilli can be assumed.
- (6) Both staining methods and inoculation experiments may be carried out and still no bacilli be found; yet the patient may be the subject of incipient phthisis and later demonstrate this fact by progressing into the advanced stages of the disease. Such sputum may also infect laboratory animals with tuberculosis.
- (7) Probably in rare instances tubercle bacilli are

found in small numbers by ordinary staining methods in the sputum of normal subjects in ordinary daily life. This has never occurred in my experience and must be an exceedingly infrequent happening. (8) The presence of a few tubercle bacilli in the sputum must be looked upon as confirmatory of suspicious or definite physical signs. In the total absence of characteristic physical signs, large numbers of bacilli in the sputum probably point to a purely bronchial form of the disease. (9) Only in the complete absence of physical and subjective clinical signs should the occurrence of a few tubercle bacilli in the sputum be minimized. As this coincidence of conditions probably never suggests an examination of the sputum, the circumstance will probably never arise, and probably never has arisen, in which it will be warrantable to set aside the discovery of the bacilli as having no bearing on the case. (10) Typical as well as branched and other atypical forms of the tubercle bacillus may be found in the sputum of incipient phthisis. The most common atypical forms are short, thin rods, nonbeaded but staining characteristically and both acid- and alcohol-fast. (11) Tubercle bacilli should not be looked upon as a customary finding in incipient phthisis. When present they practically determine the diagnosis.

In concluding I would say that there is no question in my mind that a positive diagnosis of tuberculosis should often be made long before the fever is present, and long before tubercle bacilli have been found; sometimes before sputum can be obtained for examination.

A probable diagnosis of tuberculosis should be made in any case in which a long persistent and otherwise unexplainable cough is accompanied by either a subnormal temperature or one that rises slightly during the afternoon. When other signs appear, this tentative, care-providing diagnosis will become a positive one. It should never be allowed to *become* positive, however, and the satisfaction of the complete diagnosis should be compensated by the gratification of the cure which follows on the heels of foresight and foreknowledge.

In a recent letter from Dr. E. L. Trudeau, to whose sterling pioneer work I wish to give the credit for much of the inspiration to study along this line, there is a keen sentence: "The average medical man's idea of tuberculosis only relates to the

disease after the rational and physical signs have become well marked."

At the present time this statement is unquestionably true. It should not be true, however, a day longer than is necessary for the training of a new generation of medical men, and I was therefore sorry to hear the Health Officer of New York City make the assertion a few nights ago that the general practitioner cannot be expected to diagnose tuberculosis of the lungs in the early stages of the disease.

We should see to it that our sons do not find our eyes and ears grown too dull and our enthusiasm too cold to admit of a careful and brilliant examination of a case by every known method. The result will be as certain as the study will be full of interest.

THE CORRECTION OF ABNORMAL CONDITIONS OF THE BLOOD RELATIVE TO SURGICAL OPERATIONS.*

BY S. C. EMLEY, A.B., M.D., OF WICHITA, KAN.

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Frequently the surgeon is called upon to operate on patients who, when they first present themselves, are in no condition to stand an operation on account of deficient quantity of blood or the poorness of its quality. On the other hand, it is desirable that the patient regain his normal condition as soon as possible after operation, whether the abnormal condition of blood is due to the operation or not.

The ideal remedy is that which will restore the normal condition of the blood in the shortest time with the least disturbance to the rest of the body, the digestive system particularly. Less necessary are palatability and cost of the remedy. To determine which of several preparations best fulfilled the above conditions was the purpose of this investigation.

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All of the preparations used being recognized as good, Dr. A. J. Ochsner gave me permission to prescribe them as I saw fit to certain of his patients in Augustana Hospital. Only those cases were selected whose appearance indicated the need of a hematinic. As often as possible similar cases were paired off, one patient being given one preparation and the other patient another, and the results compared. The cases were paired according to pathological condition, age, sex, general condition and the condition of the blood as to hemoglobin and erythrocytes at the beginning of treatment. The preparations used were malt with iron and manganese; malt with iron, quinine and strychnine; Blaud's pills, and the preparation known as pepto-mangan (Gude).

After watching the effect of the medication on the patients, and observing the records, it is seen that Blaud's pills acted quickly, but constipated; the malt combinations caused nausea in a few patients, and the malt, manganese and iron combination caused constipation in nearly all. The pepto-mangan, given in milk, was agreeable to take, and in no case did it cause nausea or constipation. While in two cases the Blaud's pills acted more quickly than pepto-mangan in two similar cases, on the whole the latter gave better and quicker results than any of the others, and at the same time caused no digestive disturbances in any of the cases.

Although the investigation was undertaken for the purpose of finding the best hematinic for surgical cases, it was tried in one case of chlorosis and in several obscure medical cases.

The following table shows the results obtained in all those cases where Gude's preparation was given.' One to four drams were given in milk to each case, three times a day. The hemoglobin was estimated with Von Fleischel's hemometer, and the erythrocyte count made with the Thoma-Zeiss apparatus. The first blood count was made previous to operation in all surgical cases, and the last a short time before the patient's discharge from the hospital. The second count was never made immediately after the operation because of the temporary derangement due to the anesthetic and the loss of blood:

Name	Age.	Diagnosis.	Date.	Erythro- cytes per 1 c.c.	Per cent of Hemo- globin.
1. G. N. ¹	53	Carcinoma of stom- ach	9 /29 /03	2,920,000	33
			10 /12 /03	3,400,000	43
			10 /25 /03	3,260,000	42
2. Mr. L. ¹	49	Carcinoma of stom- ach	11 / 8 /04	2,520,000	36
			10 /29 /03	2,665,000	27
			11 /23 /03	2,900,000	28
			12 / 5 /03	2,540,000	27
3. Miss J.....	17	Acute menorrha- gia.	12 /19 /03	2,300,000	26
			12 / 4 /03	2,310,000	36
			12 /20 /03	3,565,000	44
4. Mrs. E. K.	33	Menorrhagia.....	12 /27 /03	4,160,000	49
			12 / 7 /03	4,340,000	44
			1 /10 /04	3,565,000	64
5. Mr. S.....	23	Neurasthenia (?).....	1 /18 /04	5,100,000	82
			12 /16 /03	4,060,000	60
			1 / 7 /04	4,260,000	65
			1 /14 /04	4,560,000	75
6. Mr. K.....	35	Tuberculosis of me- senteric glands.	11 /15 /03	3,825,000	62
			12 /10 /03	4,826,000	68
			1 / 4 /04	4,716,000	66
7. Mrs. F.....	23	Pelvic abscess.....	10 /25 /03	4,060,000	60
			11 /23 /03	5,100,000	69
			12 /11 /03	4,975,000	78
8. Mrs. A.....	34	Pelvic abscess.....	12 /10 /03	3,195,000	53
			12 /29 /03	4,293,000	58
			1 /11 /04	4,560,000	78
9. Miss A. J.	16	Chlorosis.....	10 /25 /03	3,010,000	45
			11 /12 /03	4,950,000	65
			11 /28 /03	5,676,000	80
10. Mrs. H.....	40	Myoma of uterus.....	7 /15 /03	2,100,000	42
			8 /17 /03	3,900,000	55
			9 /15 /03	4,500,000	80
11. Johnny L.	13	Tuberculosis of hip.	12 / 1 /03	2,680,000	45
			12 /29 /03	3,600,000	55
			1 /20 /04	4,100,000	62
12. Mr. E. P.....	21	Tuberculosis of an- kle.	10 /29 /03	4,310,000	66
			11 /10 /03	4,850,000	71
			1 /23 /04	5,166,000	75
13. Johnny F.	9	Extensive burn and infection of sur- face.	11 / 9 /03	3,560,000	50
			11 /25 /03	3,900,000	56
			1 /23 /04	4,362,000	68
14. Miss E. B.	17	Perforative appen- dicitis.	11 /25 /03	3,600,000	55
			12 /26 /03	4,000,000	65
			1 /22 /04	4,250,000	69
15. N. N.....	29	Suppurative appen- dicitis.	12 /20 /03	4,200,000	60
			1 / 2 /04	4,400,000	66
			1 /20 /04	5,120,000	75
16. Mr. B.....	28	Chronic appendici- tis.	1 / 2 /04	3,565,000	62
			1 /10 /04	4,320,000	70
			1 /23 /04	4,800,000	78
17. Mr. S.....	37	Gangrenous appen- dicitis.	10 /10 /03	3,300,000	45
			10 /27 /03	3,350,000	45
			11 /27 /03	3,010,000	40
18. Miss W. J.	29	Empyema.....	11 /20 /03	2,740,000	44
			12 /20 /03	3,070,000	52
			1 /22 /04	3,820,000	60
19. Mr. F.....	44	Cholelithiasis Chronic appendi- citis.	11 /23 /03	3,560,000	57
			12 / 4 /03	4,100,000	68
			1 /12 /04	4,640,000	78

¹Incurable.

In the nineteen cases tabulated there is an average increase of 800,000 erythrocytes and of 14.5 per cent. hemoglobin. This improvement was during forty days on an average. The usual time a patient stays in the hospital is twenty-one days when the case is of ordinary severity from a surgical standpoint. Such cases were placed on tonic treatment and showed rapid improvement, but of such cases only one (Case 16) is noted because it might be urged they would improve equally fast with or without a tonic.

It is seen from the above table that even in the cachexia of carcinoma there is a temporary improvement, which shows that in the use of this tonic we are dealing with a powerful hematinic. In Case 17 there was no improvement, the patient dying shortly after the last count. At the autopsy I found a pyogenic abscess in the liver as large as an orange and about 200 c. c. of pus below the right kidney, which explained the retrogression. In all of the other operated cases the improvement was steady and marked, especially in uterine diseases accompanied by loss of blood. In the case of chlorosis (Number 9) the improvement was remarkable, the patient being discharged cured in a little over a month, at which time all the symptoms had disappeared.

Medical Society of the State of Pennsylvania.—At the fifty-fourth annual meeting of this society, held September 27-29, at Pittsburg, under the presidency of Dr. William B. Ulrich of Chester, the following officers were elected: President, Dr. Adolph Koenig of Pittsburg; Vice-Presidents, Dr. E. V. Swing of Coatesville, W. S. Stewart of Wilkesbarre, J. M. Corson of Chatham Run and J. B. Ewing of Uniontown; Secretary, Dr. Cyrus Lee Stevens of Athens; Assistant Secretary, Dr. Theodore B. Appel of Lancaster; Treasurer, Dr. G. W. Wagoner of Johnstown. The secretary, Dr. C. L. Stevens of Athens, was appointed editor and publisher of the *Pennsylvania Medical Journal*, the official organ of the society. The next annual meeting will be held at Scranton.

A NOTE ON THE ROLE OF THE THYROID GLAND IN EXOPHTHALMIC GOITER ASSOCIATED WITH PARALYSIS AGITANS.*

BY ALFRED GORDON, M.D., PHILADELPHIA, PA.

The pathogenesis of Graves's disease is still a subject of discussion. The partisans of the theory of hyperthyroidization, as well as those who believe in a nervous origin of the disease, particularly in that of the cervical sympathetic system, all report proofs in favor of their respective views. However, an impartial analysis of facts, clinical, as well as experimental and pathologic, compels us to look at the disease in question as having a nervous origin. In a contribution published in the *Philadelphia Medical Journal* in 1900, the writer discussed at length the various theories and reviewed critically all the accumulated data concerning the physiology and the pathology of Graves's disease; from this study he arrived at certain therapeutic suggestions. It is necessary to recall a few facts in order to emphasize the importance of the subject we have before us to-night. Scientists generally admit that in exophthalmic goiter all the phenomena are the result of a permanent irritation of the vasodilator nerves situated in the sympathetic nerve (classical experiments of Dastre and Morat), and, as the vasodilators of the head and heart have their deep origin in the medulla, it is there that we must look for the explanation. The sympathetic nerve sends nervous filaments to the bottom of the orbit, thyroid gland and cardiac plexus. With a permanent irritation of the vasodilators coming from its center there is a constant afflux of a considerable amount of blood to the thyroid gland and hypertrophy of it follows. The dilation of the retobulbar vessels leads to protrusion of the ocular globe and we have exophthalmos. The filaments going to the heart give rise to tachycardia.

The advocates of the opposite view maintain that the irritation of the sympathetic nerve, which produces the above-mentioned symptoms, is caused by the excessive secretion of the thyroid gland and consequently by accumulation of the surplus of thyroïdin, the normal function of which is to neutralize the toxic products of the organism. Whether the

*Read before the Philadelphia County Medical Society, Sept. 14, 1904.

syndrome of the affection under discussion is due to an initial irritation of the center of the sympathetic system and to a secondary irritation of the thyroid, or to an irritation of the sympathetic, it is impossible as yet to state. The fact nevertheless remains that the thyroid gland is involved, and in order to interpret properly the disturbances which we may encounter in the course of Graves's disease, we must turn our attention to the physiology of the gland and to the consequences which its pathologic condition leads to. Schiff, in his *Untersuchungen über die Zuckerbildung in der Leber*, 1859, was the first to call attention to the fatal effect of thyroidectomy. Reverdin and Kocher have shown that tetany and myxedema may follow extirpation of the thyroid. Experimental researches have shown that the effect of this ductless gland is various: in some cases the nervous system alone suffers, in others the general nutrition. The suppression of the function of the thyroid produces myxedema; exaggeration of its function is one of the symptoms of Graves's disease. In both cases there is supposed to be a toxic condition of the organism. That thyroid auto-intoxication exists was proven by the studies on toxicity of the tissues, blood and urine. Ughetti, Mattei and others found that the blood of a dog, in whom the thyroid was removed, had no effect on a normal dog, but produced a continuous tremor in an animal whose thyroid was extirpated. Gley, Vassali and Generali extirpated the parathyroid glands and this was followed in course of a few days by a generalized tetany. Gley saw fibrillary contractions produced by the blood of an animal in which the thyroid was destroyed. Multiple changes in various organs were found after thyroidectomy, as, for example, dilation of the bloodvessels, changes in the hepatic and renal cells; but the most important changes are those of the nervous system. It appears that the brain, cerebellum, medulla and anterior cornua of the spinal cord are the seat of lesions. According to the experiments of Vassali and Donaggio degenerative changes were found in the pyramidal and posterior tracts. In MacCallum's findings marked chromatolysis of the motor cells of the cortex and cord was distinct, while *ad vitam* tetanic convulsions, or pronounced depression, were present after extirpation of the parathyroid and thyroid glands. It is true that it is difficult as yet to appreciate the real value of all

these findings and the real nature of the poison which produces those lesions; it is nevertheless important to recognize the relationship between various affections and disturbances of the function of the thyroid. Our knowledge of the ductless glands, although in its infancy, nevertheless widens from day to day; more and more facts are accumulating, and all tend to show the great multiplicity of morbid symptoms produced by removal or alteration of function of those mysterious organs. The doctrine of internal secretion of these glands must be accepted, as it explains many physiologic phenomena heretofore obscure.

In December, 1903, I had the honor of reporting before this Society facts concerning the occurrence of diabetes mellitus and myxedema. A careful analysis of all the data and a close observation of the symptoms before and after the treatment, showed clearly the great dependence of these two morbid conditions upon the deficient thyroid function. To-night I bring before you another interesting and instructive occurrence of two morbid conditions, in which, again the thyroid undoubtedly plays some rôle.

The history of the patient is as follows :

Mrs. A. D., aged 39 years, whose previous personal and family histories are negative, noticed 8 years ago, after her last confinement, a gradually growing goiter. Two years later she began to be nervous, irritable, and shaking of arms and legs soon made its appearance. Within the two following years the tremor spread to the head and body. At the same time she began to suffer from shortness of breath with palpitation of the heart on the slightest exertion. Shortly afterward she noticed a gradually developing staring of the eyes. Other symptoms soon made their appearance: drowsiness with an imperative desire for sleep, "sinking" spells and headaches. About a year ago the patient noticed a rigidity of the trunk and of the upper extremities. The following symptoms were stated when she presented herself at the Jefferson Hospital for examination. Face thin and flushed, with mask-like expression, features show immobility of muscles. Eyes, while not very protruding, are nevertheless distinctly staring and widely open. When patient is told to look downward, the upper lid does not follow completely the downward movement of the globe; von Graefe's

sign is therefore very suggestive. There are also nystagmiform movements upon lateral movements of the eyes. Pupils are equal, react normally to light and accommodation. There is high hyperopia. Eyegrounds are normal. At the base of the left side of the neck there is a large mass, evidently an enlarged thyroid. The goiter is soft and not distinctly pulsating. Measurement at the base of the neck over the center of the goiter is 32.5 cm. The examination of the heart shows a pronounced tachycardia without murmurs, but with a marked accentuation of the first sound. The maximum intensity of the heart beat is in the 7th intercostal space, external to the mammillary line. The pulse is rapid and small, beating around 140 per minute. The patient's carriage and attitude suggest rigidity of the vertebral column, but there is no real stiffness, as passive movements of the trunk are possible. The arms and especially the hands are in a characteristic position. The rigidity is only apparent. The body is again bent forward, but again there is no real rigidity. When she sits down, gets up or turns, the whole trunk moves like one rigid mass. The thumb is applied against the other fingers. A fine tremor is present in both hands, which increases at each voluntary act. The tendon reflexes are exaggerated. The gait is shuffling, the steps are short. There is the so-called propulsion movement; when the patient is slightly pushed forward, there is a tendency to move forward for a certain length of time. The speech is rapid, monotonous and is no more varied by emotional expression than is the face; she runs words and sentences together. The mental faculties are normal. To sum up, we are in the presence of a symptom group constituting Graves's disease associated with Parkinson's disease. Exception may be taken to the slight degree of exophthalmos, but it is to be remembered that this symptom may be manifested only in a "staring" of the eyes without a real prominence of the eyeballs. And, on the other hand, there are cases of Graves's disease without exophthalmos. However, the goiter, tachycardia and tremor are present and marked. As to the paralysis agitans, the attitude and carriage of the patient, the stiffness and fixation, the expressionless facies and the propulsion are sufficient signs to make the diagnosis at first glance. The tremor, however, is not very distinct, but a close observation will tell an experienced eye that the tremor is that of paralysis agitans.

The pathogenesis of paralysis agitans is undergoing the same fate as that of other functional nervous diseases. The microscopic findings of the cases of Parkinson's disease as reported by competent and reliable observers lead to no definite conclusions; while in some cases they are contradictory, in others they are distinct. There are, however, some records, which show a more or less constant condition, viz.: that of the blood-vessels; thickening of the intima and media with cellular infiltration are the usual changes found in the majority of those cases, which presented pathologic conditions under the microscope.

The fact that the clinical manifestations are so constant, is sufficient to admit the existence of a certain influence, be it a toxin, which bears its action upon the same nervous elements in every case and produces the characteristic rigidity, tremor, etc. We also know that toxic elements in a great many cases alter first of all the blood-vessels and the nervous elements suffer secondarily. The history of syphilis is the best illustration. Clinically intoxicants like mercury and arsenic are, among other symptoms, followed by a tremor resembling that of paralysis agitans or of exophthalmic goiter. In the present state of our knowledge we are not in a position to define precisely what particular portion of the central nervous system is affected in paralysis-agitans, no more than in chorea and in other neuroses. We can only state the fact that the function of the cerebro-spinal axis is disturbed.

Since no external agent, introduced into the system, is apt to produce the symptom group in question, we are bound to address ourselves to the agents within us, which are indeed so abundant. Autointoxication must be thought of, and various obnoxious elements thrown into the circulation by various glands disturbed in their function must be taken into consideration. The internal secretion of the ductless glands must be here again referred to. The thyroid with the parathyroid, thymus, pituitary body, pancreas, adrenals, are all organs, the intimate nature of which is not elucidated in its entirety, but we are already in possession of quite a large number of facts showing clearly their relation to each other, also the effect of their disturbed functional activities upon the system. Here we have two diseases in the same individual, whose thyroid gland

does not supply the necessary element (whatever it may be) for neutralization of the poisonous material secreted by various organs ; or else from the fact of being large or perhaps hypertrophied the thyroid supplies in excess the above-mentioned neutralizing element with this result, that in itself is apt to act prejudicially on the organism. In my judgment it is the question of more than a mere coincidence, as similar facts were reported by others. In 1883 Moebius reporting a case of association of Parkinson's and Graves's diseases, raises the question whether the diseases are not due to a pathologic condition of some gland with an internal secretion. The same view he expressed also in 1898. In 1891 Landberg reported a case of paralysis agitans associated with myxedema, and the postmortem examination showed an atrophy of the thyroid gland, which, in the author's opinion, was the cause of both maladies. Let me only call your attention to a fact reported by the Italian writer, J. Codina Castelloi, in *Revista de Medicinar y Cirurgia practicas*, 1903. He performed two autopsies (patients died having paralysis agitans) : in one he found the thyroid gland sclerosed, it weighed only nine grams ; in the other the gland was in a state of cystic degeneration. Clinically he also obtained very encouraging results with thyroid treatment.

Other so-called functional nervous diseases have been reported in association with Graves's disease, as, for example, chorea, epilepsy. Facts of this nature are accumulating and perhaps they are more frequently met with than reported. There is undoubtedly a wide field for physiologic and chemic research, which will some day elucidate one of the most obscure questions of medical science. No doubt therapeutics will largely benefit by it. The subject is captivating just because of its obscurity.

Medical Wisdom of Cervantes.—Cervantes, in *Don Quirote*, says that the beginning of a cure consists in the knowledge of the distemper, and in the patient's willingness to take the medicines prescribed to him by his physician.

Simple medicines are always more estimable and safe, for in them there can be no mistakes ; whereas in such as are compounded, all is hazard and uncertainty.—*N. Y. Medical Journal*.

CORRESPONDENCE.

THE LOCAL TREATMENT OF ERYSIPELAS WITH ACETOZONE.

To the Editor ST. LOUIS MEDICAL AND SURGICAL JOURNAL:

Dear Sir:—I had an ugly case of facial erysipelas in a woman of about thirty-eight years. I used a local application, to begin with, a saturated solution of boric acid, and depended largely upon tincture ferric chloride as an internal remedy. I got the attack under control and supposed I would have no further trouble, but all at once the disease began to spread over the scalp. The usual remedies did no good. I thought that if acetozone was the germ destroyer it was represented to be, it should be of use to me. So I made a solution of fifteen grains to two pints of water and used it freely on the scalp. I obtained results at once, and in twenty-four hours the disease had abated.

J. KNOWLES, M.D.,
Logan, Iowa.

Drug Counterfeiters Arrested.—The police of this city arrested last week a gang of men charged with counterfeiting certain patent medicines and proprietary coal-tar analgesics and hypnotics. Millions of pills, put up in imitation of a popular patent medicine, were seized, and also vast quantities of spurious coal-tar products; among the latter were some tried remedies in constant employment in legitimate medicine. Samples of the "fake" stuff were obtained, it is alleged, at over 1,500 drug stores in this city and vicinity. These arrests are the result of a long and patient investigation extending over nearly nine years. The authorities say that they have now in their possession sufficient evidence to show exactly how the swindlers worked. There are charges enough against several men to give them long terms of imprisonment if convictions follow the well-planned arrests.—*Medical Record*.

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Editor and Proprietor.

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EDITORIAL.

THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

As our readers are well aware the next meeting of the American Medical Association will take place at Portland, Oregon, during the month of June, 1905. It may seem a distant point to some members of the medical profession ; but, if we are to judge from the promises which have already been made the attendance will, to say the least, be an enormous one. The committee on arrangements is an active and efficient one, composed as it is of A. C. Smith, George F. Wilson, William Jones, Henry Waldo Coe, Andrew J. Giesy and Ernest F. Tucker. These represent the enterprise and professional spirit of Portland and we may expect great things of them. We cull the following from the *Medical Sentinel*, published at Portland and located at the very center of arrangements :

Committee on Meeting Places.—Drs. E. F. Tucker, Chairman; George B. Story, H. F. McKay, J. J. Pantón, D. H. Rand, and K. A. J. Mackenzie (ex-officio).

Instructions.—The meeting places should be very central, within a radius of five or six blocks. The committee is referred to the Exposition Building as an ideal place for the general session, which must have a seating capacity for 2,000. There are ample facilities in this building for exhibits, for registration booths, postoffices, etc.

The Medical and Surgical Sessions will require seating capacity for 500 delegates; Obstetrics and Ophthalmology, from 100 to 200. The others less than 100. Stomatology, not more than a score. Provision must be made for meeting places for from 12 to 15 sections. Estimates of the rents of all the meeting places will be obtained, together with details of lighting, janitor service, etc. The central meeting place must be furnished for a House of Delegates, which will require a seating capacity for 125 delegates.

It might be well to consider the facilities that will be afforded by the Auditorium Hall in the Lewis and Clark Fair grounds as a central meeting place.

Committee on Hotels.—Drs. Wm. Jones, Chairman; R. C. Coffey, W. H. Skene, C. H. Wheeler, A. E. Mackay, H. C. Bowers (by courtesy), and K. A. J. Mackenzie (ex-officio.)

Instructions.—It will be necessary to have an estimate made of the hotel accommodations; how many rooms can be reserved in the various hotels in the city, and what rooms are available in the better class apartment houses. It will be necessary, also, to find out if private dwelling houses will have to be used to accommodate the Association, and, if necessary, an option should be obtained on rooms. The committee will be advised later as to the construction of an inside inn at the Lewis and Clark Fair grounds.

The committee is referred for information to a company, which has been formed, and has taken up options on rooms for the Lewis and Clark Fair. The work of the committee should embrace a scheme so perfect as to enable delegates and their families, on their arrival in Portland, to be directed to their respective lodgings.

One of the important points in connection with this meeting

of the Association is concerning what will be the probable cost of transportation. In view of the fact that the Lewis and Clark Exposition will be held about this time in Portland it is reasonable to presume that the cost of railroad transportation will be comparatively low. We have assurances to this effect and have no reason to doubt them.

Among the best roads west of St. Louis to Portland, Oregon, the Burlington Route is beyond all doubt the one in the lead. It is the superior of all others in every respect and is certainly the one which should be chosen by all who intend attending the next meeting of the American Medical Association. So far as prices are concerned it will certainly offer a rate which will be satisfactory in every respect to all concerned. The Burlington has always done this and will continue to do so.

Wm. Warner & Co., of Philadelphia, have consistently kept up their reputation for purity and variety of pharmaceutical products throughout the many years they have been in business. Their latest achievement lies in their obtaining the Grand Prize, the highest award of the Louisiana Purchase Exposition just held in St. Louis. This was awarded over all competition and is an honor not only fairly won but richly deserved. We are pleased to see that this firm, which has always made honest pharmaceutical preparations for the medical profession has been so thoroughly appreciated at the greatest Universal Exposition which has ever been held. We congratulate the firm and can only reiterate the unbounded confidence we always had in it and its products.

BOOK REVIEWS.

International Clinics. A Quarterly of Illustrated Clinical Lectures and especially prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by A. O. J. KELLEY, A.M., M.D., with the Collaboration of WM. OSLER, M.D., JOHN H. MUSSER, M.D., J. B. MURPHY, M.D., JAS. STEWART, M.D., A. MCPHEDRAN, M.D., THOS. M. ROTCH, M.D., JOHN G. CLARK, M.D., JAMES J. WALSH, M.D., J. W. BALLANTYNE, M.D., JOHN HAROLD, M.D., EDMUND LANDOLT, M.D., RICHARD KRETZ, A.M. With regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Vol. III., Fourteenth Series, 1904. 8vo. pp. 302. Illustrated. [Philadelphia: J. B. Lippincott Co. 1904. Price \$2.00 net; half leather, \$2.50. Each series of four volumes.

We once again have the pleasure of an opportunity of reviewing a number of this sterling publication, which has made itself not only popular but indispensable with the better portion of the medical profession of this country and of England. Since the very inception of *International Clinics* it has progressively improved and the present issue is one which is far in advance of any of its predecessors. This is true not alone for the quality of the contributions made but for the manner in which they are presented. Thus in the present number there is a wealth of illustration of a superior character both as illustrative and superior in execution. There can be no doubt whatever that it has such features which go far to enhance the value of a publication of this character. Those who have an opportunity of examining this volume will certainly not hesitate to buy it, and their investment will certainly be a good one and one which they will have no cause to regret.

The first part of this volume contains twelve papers on Syphilis, constituting a veritable symposium on the subject. The articles are: Uncertainty as to Syphilitic Inoculation, by Campbell Williams, F.R.C.S.; The Differential Diagnosis of Syphilitic Eruptions, by A. H. Ohmann-Dumesnil, M.D.; Syphilitic Fever, by G. Carriere, M.D.; Syphilitic Headache and Lumbar Puncture, by G. Milian, M.D.; Syphilis of the Nervous System, by William G. Spiller, M.D.; Laryngeal Syphilis and Tabes, by A. Chauffard, M.D.; Hyperacute Secondary Syphilitic Nephritis with Fatal Outcome in spite of Mercurial Treatment, by Drs. Chauffard and Gouraud; Fetal Syphilis, by

J. W. Ballantyne, M.D., F.R.C.P. (Edin.), F.R.S. (Edin.); Syphilis and Suicide, by Alfred Fournier, M.D.; The Treatment of Chancre, by Thomas R. Neilson, M.D.; The Hypodermatic Treatment of Constitutional Syphilis, by William S. Gottheil, M.D.; and the Treatment of Syphilis by Calomel Injections, by Alfred Fournier, M.D. As may be seen from this list the subject is pretty well covered, and the second contribution is illustrated with twenty-two plates, all but one being original with the author. The articles on treatment are all good and fully up to date. They are contributed by well-known authors and are in the highest degree valuable and instructive. They will certainly repay careful perusal and study.

In the department devoted to Treatment there are but three articles, the two principal ones of which are: Rest-cure in the Treatment of Chronic Constipation, by Ismar Boas, M.D.; and The Treatment of Diabetes Mellitus, by T. Stuart Hart, A.M. M.D. In the department devoted to Medicine a very good contribution is that by W. H. Allchin, M.D., F.R.C.P., F.R.S. (Ed.), on Indigestion. Diseases of the Liver is excellent and is by William H. Katzenbach, M.D. Diseases of the Liver by Louis Fougères Bishop, A.M., M.D., and Scurvy by Andrew Duncan, M.D., B.S. (London), M.R.C.P., F.R.C.S., terminate this part. That portion devoted to Surgery contains four articles, among which an excellent one on umbilical hernia in the female, by Thomas H. Manley, M.D., Ph.D., and one on the Technic, Diagnosis, Significance, and Therapeutic Application of Lumbar Puncture, by Purves Stewart, M.A., M.D., M.R.C.P. Gynecology is represented by three articles of more than ordinary value and interest to the physician. The volume closes with an article in the department of Neurology. This consists of a very thorough study of Paralysis Agitans by F. W. Langdon, M.D. It is a well-considered contribution and reflects great credit on the author.

The publishers have produced this volume in the same good style as all the other numbers of the series, and they are certainly earning many friends for it by the care they have taken to furnish superior material presented in a fine form at an exceedingly moderate price.

The Pathology of the Eye. By J. HERERT PARSONS, B.S., D.Sc. (Lond.), F.R.C.S. (Eng.) Vol. I., Histology, Part 1. 8vo. pp. 388. [New York: G. P. Putnam's Sons. 1904. Price, \$3.50 net.

We have often heard it said that there are too many medical books written and published, but we have never seen too many good ones issued from the press. Of the writing of books there seems to be no end, but of the writing of good books there seems to be but little, and by good books we mean that sort

which will outlive their authors and such as are not for a day or a year, but for all time, even should they go out of fashion. Principles never die, and he who has but enunciated them has certainly produced an imperishable work. The book, which is the result of much study and experience, and which is written only after much mature thought, is the one which is destined to make its mark and its author's fame. It is a work which certainly bears the impress of its author's intelligence and thought.

The book before us is the first part of a work which will embrace four volumes, the first two dealing with the Pathological Histology of the Eye, and the last two with the General Pathology of the Eye. The volume before us includes the pathological histology of the Lids, Conjunctivæ, Cornea, Sclerotic, Iris and Anterior Chamber, Ciliary Body, together with the Bacteriology of the Conjunctiva. As can be seen from this list, the first volume of this work is pretty complete and is certainly a good index of what the entire monograph promises to be. So far as we know it will be the only monograph on the pathology of the eye that has yet been written in any language. It is this very fact which will make this treatise most valuable to all pathologists and ophthalmologists, not to mention all those members of the medical profession who are interested in the study of the subject of their calling in a serious manner.

The method followed by the author in the treatment of his subject is natural and progressive. He begins by giving a description of the normal histological appearances found and then proceeds to give descriptions of pathological conditions. These latter are shown in microscopic appearances, and the illustrations given are very demonstrative and easily understood. In discussing the lids the various skin diseases which affect them are given, and in his consideration of the conjunctiva he gives pictures as well as an account of the various bacteria which are found on and in this mucous membrane. The Cornea receives quite extensive consideration in Chapter II. Wounds, Inflammatory Conditions, Degenerations, Pigmentation, Cysts and Tumors are taken up *seriatim* and spoken of in a very thorough manner. Chapter IV. is occupied with a description of the pathological conditions observed in the sclerotic. The Iris and Anterior Chamber and the pathological changes observed in them are interestingly discussed in Chapter V. The final chapter of this volume, Chapter VI., contains some of the most interesting matter in the work, dealing as it does with the ciliary body and its diseases, including degenerations, tumors, etc. These are certainly of more than ordinary interest, and albeit the chapter is a short one it contains much of interest and of value which is placed before the reader in an instructive and plain manner.

A quality of the author is that he refrains from being dogmatic. The various theories which have been based upon observed facts are reviewed and weighed with the object of determining which are the best to adopt as working hypotheses. There remains still much to be done before absolute conclusions can be definitely formulated. The book before us will certainly prove a great help in this direction. The bibliography which is given is the best and carefully selected. The references follow each subject discussed, thus adding to ease and rapidity in looking up other authors. The illustrations which are given are numerous, there being no less than 267 in this volume, the larger number being original. They are all well made and very well printed. The type used is large and easily read and the paper is of the very best quality. The publishers have made of this a magnificent volume in every respect and we shall look forward to the succeeding volumes with much interest.

Kirke's Hand-Book of Physiology. Nineteenth London Edition, Revised and Enlarged. By W. D. HALLIBURTON, M.D., F.R.S. Thoroughly Revised and in Many Parts Rewritten. Small 8vo. pp. 902. With nearly Seven Hundred Illustrations, including some Colored Plates. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, cloth, \$3.00 net; sheep, \$3.75 net.

The supreme test of a text-book is beyond all question the length of time during which it has preserved its usefulness as well as the demand which it has created, and there is no better evidence of these two qualities than the number of editions through which it has passed. In the way of text-books on physiology Kirke's has held more than its own both in Great Britain and in this country, and deservedly so. When we see the nineteenth edition before us we take it up with a smile of real pleasure, as it is like grasping an old friend by the hand. This book has been written with a real purpose in the mind of its author—that of furnishing instruction in a thorough and comprehensive manner, and that he has succeeded in his purpose is evidenced by the success which it has enjoyed at the hands of undergraduates in medicine. Americans, who claim to be more discriminating in their choice of text-books, have been equally taken up with this one, and any one who will carefully read the book will be forced to confess that it is fully deserving of the praise which has been bestowed upon it; and this more especially as it has been carefully kept up to date, so far as progress in physiology is concerned.

A method which has been followed in the printing of the book is one which should certainly be commended. The

editor, and *de facto* author, states in his preface: "Sections which treat of what may be termed 'advanced work' have therefore been made as brief as possible, and have been inserted in small print. The student on reading the book for the first time will find it best to omit these passages. When he has mastered the continuous story told in the large text, he will then be able to study what is given in small type." This is certainly good advice and is certain to advance a student more rapidly in his acquirement of physiology than if he attempts to embrace too much at the very inception of his study of the subject. He will find that in this, as in many other studies, the old Latin motto, *festina lente*, is the safest. Some objections may be made by certain ultra modern critics that the book deals too much with histology, a subject now relegated to special works on the subject; that physiology should simply deal with functions, etc., *ad nauseam*. We find, however, that those text-books which afford a good knowledge of histology to those studying their pages produce the best students of physiology as well as of histology, and after all they are complementary studies, and at the beginning form the basis of deeper and more prolonged studies of a more deeply scientific character. In the book before us the illustrations have been made with great care, in many instances being printed in colors.

Those portions of the book which have undergone most revision are those relating to the nervous system and to the circulation of the blood. The former is of more than passing interest especially in view of the fact that we are given the results of the author's experiments, which are in the highest degree interesting to those who devote any attention to the subject. Hemodynamics is also thoroughly taken up, and this little studied subject is rendered very clear and intelligible in the book before us. We have certainly enjoyed reading this hand-book and can easily understand how it illustrates the romantic side of science. It is a text-book which cannot fail to interest a student if he has but moderate intelligence and it will completely captivate him who is intellectual.

The book is well printed in clear, large type on good paper. The size of the book, as now issued, is more convenient to handle than in previous editions. The illustrations are numerous and well made. All the advantages offered by this book should certainly ensure a large sale for it.

A Treatise on Bright's Disease and Diabetes. With Especial Reference to Pathology and Therapeutics. By JAMES TYSON, M.D. Second Edition. Illustrated. Including a Section on the Ocular Changes in Bright's Disease and in Diabetes. By

GEORGE E. DE SCHWEINITZ, M.D. 8vo. pp. 381. With 7 Colored Plates and 43 Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$4.00 net.

The present is the latest treatise which has emanated from the pen of Dr. Tyson, and like everything which has been written by him it is destined to be epoch-making. The author has done much to establish American medicine upon its true basis, and has contributed in no small degree to its advance and to its establishment upon a sure footing both scientific as well as practical, with which it is destined to elicit praise wherever medicine is studied and practiced in a rational and intelligent manner. The great point in favor of the treatise before us is that it is written in a plain manner which is easily understood. In fact, it has been the prime object of the author to instruct and not to impress his readers with his superior knowledge, which is certainly apparent to him who studies the pages of this work. He has also endeavored, and very successfully too, to make the book a thorough one, and in order to encompass this he has enlisted the aid of a very competent colleague and acknowledged authority in ophthalmology to write on the ocular changes in Bright's Disease and in Diabetes, and Dr. de Schweinitz has certainly well acquitted himself of his task.

This book is now in its second edition, and this had become necessary in view of the fact that the first had been out of print for years. Many changes have occurred since the appearance of the first edition, and as a consequence it has been necessary to rewrite it in large part and to make many additions. An entirely new section on acute interstitial nephritis has been added and one on the dietetic treatment of Bright's disease, a subject which is attracting much attention of late inasmuch as many erroneous views have become prevalent regarding the matter. In a consideration of this subject, more especially of the treatment of diabetes mellitus, there has been included an analysis of some of the more usual foods, more especially in regard to carbo-hydrate constituents, and these analyses have been made quite independent of the claims of their makers, in order that the physician may be enabled to judge for himself and may decide which to select. The objection may be made that the present work is not up to date because the author devotes considerable space to the histology of the kidney, and yet it must be acknowledged that such demonstration of the finer anatomy of the kidney is certainly a great aid to a proper understanding of its diseases as well as to a better knowledge of its normal functions as well as pathological workings. This is the more true when we take into consideration the great pains the author had in making this part thorough.

The subject of Bright's Disease occupies fourteen chapters

for its consideration, and the author, in common with the majority of writers on the subject, is in favor of retaining the name. Diabetes is easily disposed of in three chapters. Throughout there are a number of good and well executed engravings, the colored plates being superior in their execution. With the exception of one or two they have all been made from the colored drawings of Margaretta Washington, whose skill is universally acknowledged.

The publishers have made a handsome volume of this, the binding with beveled edges being in keeping with the sumptuous appearance of the volume.

Text-Book of Human Physiology. Including Histology and Microscopical Anatomy, with especial Reference to the Practice of Medicine. By DR. L. LANDOIS. Tenth Revised and Enlarged Edition, edited by ALBERT P. BRUBAKER, M.D., translated by AUGUSTUS A. ESHNER, M.D. 8vo. pp. 1027. With 304 Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, cloth, \$7.00 net; leather, \$8.00 net.

An author should certainly feel flattered when one of his works reaches a tenth edition, and still more so when it is thought of so highly that it is translated into a number of foreign languages. This is what has been the case with the work before us. Appearing originally in German it awakened such wide-spread attention that ere long it appeared translated into French, Russian, English, Italian, and Spanish. Such honors are reserved for the few, and they are the ones who are able as well as capable of writing works which awaken the admiration of those others who, whilst foreign of tongue and of country, are all members of that large confederation which acknowledges none but science as its master.

The text-book before us is no strange one, and it has certainly proven its value, as is amply testified by the number of editions through which it has gone. It has made itself popular not only because of its value to both physicians and students, but because its value makes itself apparent directly it is studied. A new English translation had become a necessity and this was undertaken by the present publishers, who certainly made a good choice in their selection of Dr. Eshner for this work. Dr. Brubaker was also an excellent selection for the no less difficult task of editor although, he being himself the author of a very good text-book on physiology, the task was certainly a congenial one. Under all these circumstances it seems but natural to note the production of the more than ordinarily excellent work before us. The author has made it a point, and in this he has very well succeeded, to make his book on physiology an aid to the study of the practice of medicine, and

he has completely succeeded in demonstrating the mutual interdependence of these two branches of medicine and their value to the student and to the practitioner.

The author has added value to his work by incorporating those results of physiological investigation which, in his opinion, would have a permanent value as well. We have no doubt there is probably no work at present extant which so thoroughly and satisfactorily represents the present state of physiological science so well, and its relation to pathology and clinical medicine so clearly, as the book before us. As it is well known that pathological processes are really nothing but variants of those which are physiological, in one direction or another, the author has appended to nearly every section those variations which to the clinician are pathological. In this manner the work has been made to serve a double purpose and the real value of physiology has been demonstrated to the physician as well as student. This point alone should render the work a popular one and cause its adoption by all those who desire to have a scientific as well as practical value of undoubted worth.

The publishers have made a handsome volume of this and it is first-class in every respect. The illustrations are numerous and well executed and cannot be anything but a great help to the reader. We are pleased to welcome this new English translation which cannot be anything but successful.

A Text-Book of Practical Therapeutics. With especial reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By HOBART AMORY HARE, M.D., B.Sc. Tenth Edition. Enlarged. Thoroughly Revised and largely Re-written. 8vo. pp. 908. Illustrated with 113 Engravings and 4 Colored Plates. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, cloth, \$4.00 net; leather, \$5.00 net; half morocco, \$5.50 net.

Therapeutics is one of the branches of medicine which is certainly destined to hold a foremost position in the estimation both of medical students and of practitioners. It constitutes in itself a guide, counsellor, and friend, and when founded upon a rational basis it is the sheet anchor of the patient. It must not be forgotten, however, that therapeutics is not necessarily drug-giving, nor does its application find itself confined to the merely simple task of writing prescriptions for medicines. It is rather the application of those means or methods which are destined to relieve patients of whatever complex of symptoms presents itself which is called disease and which is an indication of the pathological process or condition which exists at the time. A book or work which in itself combines the relation of the actions of remedies, the diseases in which these are indicated, and the results to be expected is certainly one of the highest value.

Such an one is the book before us, and that it has fully filled the requirements expected of and from it is certainly fully attested by the fact that it is now in its tenth edition in a period of less than fourteen years; and according to the publishers it has been printed three times as often as it has had editions. This is a truly remarkable record, and yet it is not surprising in view of the fact of the superiority of the work and its applicability and general usefulness in the practice of medicine. Furthermore, the author has carefully kept the book abreast of the times; and in the case of the present edition it has not only been re-written but re-set in type as well, so that it is in reality a new work. It is considerably larger than in its preceding edition and the improvements made are noticeable on every page. To him who has had occasion to use preceding editions, the present is superior. Still, the general arrangement has not been changed, the author having very wisely deemed it best to adhere to the former division of the subject, as it has proven itself practical and very convenient for the purposes of quick reference and rapid acquirement of knowledge on any topic.

The book is handsomely gotten up by the publishers, who, notwithstanding the marked increase in pages of this edition, have adhered to the former price. So far as the merits of the work are concerned, they are certainly self-evident, and we can but reiterate our former recommendation to all students and practitioners to add this book to their libraries, as they will find it one of the most useful and practical for daily use and to consult when they come to hard places. It is certainly well worth keeping and frequently consulting.

Mechanical Vibration and its Therapeutical Applications. By L. H. ARNOLD SNOW, M.D. 8vo. pp. 297. [New York: The Scientific Authors' Publishing Co. 1904.]

That Scientific Massage is an excellent mode of applying mechanical therapeutics no one will deny to-day. The good results obtained from its rational practice have been such as to render many perhaps unduly enthusiastic in its praises. This combined with the Swedish movement cure has done so much good that many are to be found who are ready to assert that these mechanical means will prove sufficient to cure all ills to which human flesh is heir. Of course this is rather an exaggerated view to take of what is really a good therapeutic measure when properly applied. It is hardly necessary to call attention to the fact that too much praise has gone very far to hurt a really good method in physiological therapeutics. On the other hand, no one should condemn it without possessing a definite knowledge of it, its indications and its possibilities. A great objection to manual massage has been the fact that it

involves too much physical exertion on the part of those who practice it and it furthermore lacks much in the exactness such as a machine possesses.

In the book before us we have a very good exposition of the subject of mechanical vibration. The author begins with a good description of the various makes of vibrators and oscillators. In these descriptions are given good illustrations of the various forms of apparatus, and there are also furnished sectional views of them showing their mechanical construction. This is of more than ordinary interest, and there certainly can be no question that a more intelligent use can be made of a machine of this sort whose mechanical construction is understood. In addition to this we are given descriptions and illustrations of the different forms of vibratodes or terminals attached to the vibrator. The remaining portion of the book is devoted to the vibratory treatment of various diseases and affections, and these include many organic as well as functional troubles, perhaps a little greater in number than would be included by one not so enthusiastic on the subject. The methods of applying the treatment in various diseases and the points to which the vibratodes are to be applied are described in detail and made so clear as not to require any special training from an expert practitioner of the method. It is really made so clear that any intelligent physician may make a correct use of it.

In addition to this the large number of illustrations render it still clearer to the reader, and the entire book will be found to contain many useful hints for him who may find himself in need of something of the sort. The book is a good one and will no doubt be a favorite with all who practice massage and mechanico-therapeutics. It contains 51 figures and nine full-page plates illustrating methods of applying treatment.

The Surgery of the Abdomen. Part I. Appendicitis and other Diseases about the Appendix. By BAYARD HOLMES, M.D. 8vo. pp. 350. With 39 Illustrations and 7 Plates, two of which are in colors. [New York and Chicago : D. Appleton & Co. 1904. Price, \$2.00 net. Sold only by subscription.

Whilst good books on surgery are certainly numerous enough, they are, as a rule, too general in their scope and an attempt is made to embrace too much in one volume. It is for this reason that such as are limited to one subject are preferable and usually find many readers. In the one before us we find the author limits himself to appendicitis, and in this his choice has been good, more especially in view of the fact that this has formed the sole subject of several good works which have already been published. Some of these have already passed through more than one edition which goes to prove that the subject possesses

more than ordinary interest for practitioners as well as surgeons. This is true the more especially in view of the fact that appendicitis and other diseases about the appendix are to be included among the emergencies incidental to medical practice.

The author has been thorough and honest in his work and as he very truthfully observes, "If the following pages contain an unusual number of unfavorable cases, it must be remembered that the horrible example is an effective device in teaching, and that it is pleasanter to learn from the disastrous experience of another rather than await the occurrence of similar catastrophies in one's own practice." In the first chapter the author deals with general considerations, and at its close he explains his ideal transparent clinical manikin, to which several plates are devoted. It is certainly an ingenious method to use in teaching abdominal diagnosis. Appendicitis proper is taken up in the next chapter, and in the succeeding one obscure forms of appendicitis are considered. These are noted in Chapter IV, the subjective and the objective symptoms of appendicitis. Then come, in regular order for consideration, the course and so-called complications of appendicitis, its diagnosis and differential diagnosis and its treatment. This last is without doubt the most important and is very full, and in it much attention is paid to details. The dangers of and contraindications to anesthesia are also fully considered.

Peritonitis forms the subject of Chapter VIII., in which the author claims that it is a terminal disease which is preventable but not curable. Intussusception, perforated typhoid ulcer, and carcinoma of the intestinal tract are taken up in the three last chapters. Then are given a general bibliography and what the author is pleased to call "adages."

On the whole this is a very good as well as a very interesting book, and will prove of especial value to practitioners of medicine and of more than usual interest to surgeons. The author has certainly announced a number of novel views which will, no doubt, give rise to a certain amount of useful discussion. The book is well printed and illustrated, and we have been more than ordinarily pleased to read it.

The Surgical Treatment of Bright's Disease. By GEORGE M. EDEBOHLS, A.M., M.D., LL.D. 8vo. pp. 337. [New York: Frank F. Lissiecki. 1904.

Work on the kidneys has been pursued for a number of years both by general operative surgeons as well as by those more particularly interested in and devoted to genito-urinary surgery. Progress has been constantly made and many new methods proposed, inaugurated and carried out to a successful issue. The great disadvantage which was attached to those, so far as

the general operative surgeon is concerned, has been that the articles have been isolated so to speak and not placed in an easily available shape nor in one fairly accessible to physicians or surgeons. For these reasons a collation of all the articles of one author even possesses more than ordinary interest and value and really partakes of the nature of a monograph, and there is no doubt that among the most valuable contributions to medicine are to be numbered monographs. And very naturally a work which partakes of the nature of these must of necessity be more than ordinarily useful and of value to the reader and to the student, and the one before us is just of this sort and proportionately valuable.

The author is certainly well known by the good work he has done in both abdominal and genito-urinary surgery and needs no introduction to our readers. His contributions to these subjects have been both numerous and valuable. In fact, he has established for himself a name in both. In the present work he takes up, in his separate articles, the subject of the results which he has obtained, by reason of his operations, in the way of the cure of Bright's disease and diabetes which had progressed beyond the reach of medical treatment. Two-fifths of the matter in this volume includes with reasonable completeness our present knowledge of the surgical treatment of Bright's disease. The remaining three-fifths, according to the author, is entirely new matter which has never been published heretofore, and it deals with that phase of the subject which has aroused the keenest interest in the minds of all those who are interested in the subject—the results. The author has endeavored to cover every point, and a glance at the bibliography which is appended and at the index, with cross-references, both of which are large, will show the reader the thoroughness of the book as well as the work which has been expended upon it by the author in his endeavor to furnish us with a good book.

We are certainly favorably impressed by this latest book of Dr. Edebohls. We are much pleased with it and hope to soon have the pleasure of seeing another work from his pen. His publisher has certainly brought out the work in good shape and altogether it is a good one in every respect.

Clinical Diagnostic Bacteriology. Including Serum Diagnosis and Cytodiagnosis. By ALFRED C. COLES, M.D., D Sc., F.R.S. (Edin). 8vo. pp. 237. With Colored Plates. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$2.75 net.

Bacteriology has certainly assumed a most important position in modern pathology and has and is engaging the attention of a large number of investigators. This is certainly most interesting from the standpoint of the student, but it is hardly

satisfactory to the practitioner of medicine who is especially desirous of those things which may prove useful to him as guides in diagnosis and treatment. He is especially desirous of perfecting himself in the clinical portion of his professional work, and the undoubtedly interesting as well as scientific chapters of modern bacteriology enlarge his view and make him more scientific, but do not supply that practical knowledge to him which is the essential. The great want of advanced works on bacteriology is a greater elaboration of those portions in which naught but hints and covert allusions are made to the clinical applications which are possible.

In the book before us the author has made an attempt to supply this want. His descriptions may be easily understood, his methods are susceptible of application without the necessity of being provided with a laboratory. In this small book the questions which the author considers and discusses are those of most interest to practitioners and include the following: How shall we obtain the material, how shall that be prepared for microscopic examination; what are the chief characteristics of the organism in question; with what may it most easily be confused; how can it be distinguished; and, lastly, what inferences can be drawn from such an examination which will help us in making a diagnosis, prognosis, or in carrying out treatment? These questions are both practical and useful and are treated of from a clinical point of view and as others have done from a laboratory view. It is this distinguishing feature which is destined to make this book popular and sought. It is not alone the practitioner who will find it useful, but it will prove very advantageous to hospital internes, but more especially to clinical assistants at dispensaries and free clinics where rapid work is demanded and found so necessary.

This book will be found satisfactory by all who may have occasion to use it, and it is not so large as to be unwieldy. The two plates which are given are very demonstrative. The print is large and clear and the paper good. The book is one which is to be recommended to students, teachers and more especially to busy practitioners.

New Methods of Treatment. By DR. LAUMONIER. Translated and edited from the Second Revised and Enlarged French Edition by H. W. SYERS, M.A., M.D. (Cantab.) 12mo. pp. 321. [Chicago: W. T. Keener & Co. 1904. Price, \$2.50 net.

In these modern days there seems to exist a tendency to be attracted too much unfortunately by the glamour of pathology and the brilliancy of surgery. The younger generation of medical men is, in large part, composed of elements whose

primal object seems to be to rise very rapidly, and this is best accomplished by those rapid and meteoric means which dazzle, but, unfortunately for their advocates, only for the space of a few moments to be outshone by some more brilliant exhibition. The final outcome of all of these is, as might be expected, Cimmerian darkness. The silent, obscure plodder in the less brilliant field of therapeutics has his triumphs, and they give promise of being more useful and more lasting if less brilliant. The application of discoveries is comparatively easy and requires naught but ordinary intelligence to enable him who makes use of them to obtain results in the highest degree satisfactory.

Therapeutics in common with all other departments of medicine is constantly advancing, and an appreciation of this fact has led the author of the book before us to undertake a work on the New Methods and Treatment, and so well did he succeed that, in the space of a year, there was a call for a second edition, and shortly afterwards an English translation appeared which the translator has endeavored to bring into line with English style and method. Whilst, in the natural course of events, many of the methods given will be superseded in the near future, the author has placed within the reach of his readers a large number which will prove of permanent value. Not to mention others, some articles are devoted to the colloid metals which have recently been the subject of considerable discussion. As the author states, if their study be followed up and the results obtained prove to be such as are hoped for, it will allow of the development of a new subject relative to the therapeutic action of certain ferments, namely, oxydases, reductases, and kinases. Thus it is seen that the author opens up a broad field, most interesting in character and comprehensive in its grasp.

This is a most excellent, practical and useful book, which is put up in elegant form and is certainly adapted to the needs of every physician.

A Manual of Experimental Physiology. For Students of Medicine. By WINFIELD S. HALL, Ph.D., M.D. (Leipsic). 8vo. pp. 245. With 89 Illustrations and a Colored Plate. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, \$2.75 net.

The author of this manual has had much experience in teaching students experimental physiology, and the present is the result of the evolution of the original syllabus he furnished his students and which he modified and amplified each year. The book represents in its scope that which is needed by medical students who are preparing for the practice of clinical medicine and surgery. The book is divided into two general parts. Part I. is taken up with Experimental General Physiology; and

Part II. with Special Physiology. A feature of the volume is embraced in the preliminary lessons in Cytology. This is certainly a very useful thing to the beginning work in histology, and is in general most useful in the study of physiology. The lessons which are given form a most valuable curriculum in a laboratory study of physiology. The exercises in the study of the circulation of the blood are above the average, and the work outlined for the pursuit of the study of normal hematology are certainly of the highest value and utility. Respiration, Digestion and Absorption are so presented that they will prove of the highest value in clinical medicine. The Nervous System and the Muscular System receive their legitimate share of attention and are fully considered from a laboratory standpoint.

The book terminates with an appendix purely technical in character. It deals with the instruments used, the methods employed, and formulæ of preparations needed in the laboratory. These are certainly among the essentials desired by students and of the highest use to them.

The book is handsomely bound, printed, and illustrated. It will no doubt be adopted by many teachers and is certainly destined to be a favorite with students.

The Art of Compounding. A Text Book for Students and a Reference Book for Pharmacists at the Prescription Counter. By WILBUR L. SCOVILLE, Ph.G. Third Edition, Revised and Enlarged. 8vo. pp. 337. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$2.50 net.

There is nothing more pleasing to a physician who prescribes than to have his prescriptions put up accurately, tastefully, and in a form pleasing to the eye if not to the tongue. If there be any occupation that requires neatness above all things it is certainly that of pharmacy and conjoined to this is accuracy. This is the common experience of the medical profession, and if there is a book that will bring about these results it is certainly the one which he will recommend. The one before us has already done much work in this direction and the good favor which it has met with is evidenced by the fact that it is in its third edition. It is an admirably written text book and is just the kind the pharmacist most needs and desires. For students it contains a wealth of information and gives details on those little things with which they are least familiar.

We are much pleased with the book, as it is essentially a practical book written by a practical man, and he seems to be singularly felicitous in choosing those very things which those for whom he intends the book are most desirous of knowing.

The book is an excellent one and it is to be recommended to all for its general excellence and adaptability. We can certainly approve of it and advise all pharmacists and students to buy it.

Blood Pressure as Affecting Heart, Brain, Kidneys and General Circulation. A Practical Consideration of Theory and Treatment. By LOUIS FAUGERES BISHOP, A.M., M.D. 12mo. pp. 112. [New York: E. B. Treat & Co. 1904. Price, \$1.00 net.

The object of the author of this small monograph is certainly a praiseworthy one and of the greatest practical utility to the practicing physician. As he says, and very justly, if clinical workers in the field of medicine yield that field to the so-called research workers and the laboratory men, there is certain to be a halt in the march of medicine. The author discusses his subject in a very systematic manner in nine chapters. Chapter I. is on Alterations in the Blood-vessels; II. Primary Low-pressure Cases; III. The Management of Primary Low-pressure Cases; IV. High-pressure Cases; V. The Management of High-pressure Cases; VI. Some Obscure Symptoms of Circulatory Disorder, with a Consideration of their Significance; VII. The Management of Secondary Low-pressure Cases; VIII. General Considerations; and IX. The Estimation of Blood-pressure and the Use of the Nitrites for its Modification.

This summary of the contents of the book is certainly sufficient to induce any one to become its possessor and profit by the lessons it affords.

THE MEDICAL EPITOME SERIES.

Toxicology. A Manual for Students and Practitioners. By EDWIN WELLS DWIGHT, M.D. 12mo. pp. 298. Series Edited by VICTOR COX PEDERSEN, A.M., M.D. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, \$1.00 net.

Toxicology is, beyond all doubt, one of the important subjects of a student's curriculum. He is very liable to stand in need of all of that he knows on the subject in emergency cases later on when engaged in the practice of medicine. He should be beyond the necessity of depending upon his pocket call-book for the symptoms and treatment of cases of poisoning, and be so grounded on the subject as to be ready for any case which may present itself. The little book before us, whilst not pretending to cover the ground exhaustively, does so to an extent sufficient enough for ordinary purpose, and forms a very good introductory for further reading and an excellent remembrancer for lectures.

It is put up in very convenient form and is handsomely printed and bound.

The Doctor's Recreation Series. THE DOCTOR'S WINDOW. Poems by the Doctor, for the Doctor, and about the Doctor. Edited by INA RUSSELLE WARREN. With an Introduction by WILLIAM PEPPER, M.D., LL.D. 8vo. pp. 288. Illustrated. [Akron, Ohio: The Saalfeld Publishing Co. 1904. Price, silk cloth, \$2.50; half-morocco, \$4.00. Sold by Subscription Only.

We have had the pleasure of reading all of the volumes of the present series which have so far appeared, and we can say with truth that no fair-minded individual could finally say that each one is not good and not only good but excellent as well. The editor of the entire series has so far given evidence of fine discrimination and excellent judgment in the selection both of the authors and of the material which has been presented to the readers of these books. In fact, it would be a difficult matter for anyone to pick out a more varied and a better selection of subjects adapted to the reading of both the members of the medical profession and of the laity. We become more and more pleased with the series as each successive volume appears, and we have had but little doubt that this is the manner in which all of its readers have been impressed. This quality is one which should certainly gain friends for it and, not only this, but make many purchasers for the entire work, which certainly fully deserves such recognition.

The book before us is one of poetry and it contains many poems written especially for it besides some of the best which have appeared in print. It is as fine an anthology as has ever been issued, and all those things designed to make it attractive have been supplied by the publishers. There is no claim made for it that it contains all the poetry about the doctor, as this would involve a never ending task. What it does contain are the best poems written by the best authors. The editor has most thoroughly done her work, so thoroughly that it would indeed be a difficult matter to indicate the omission of any verses which should properly have been included. Those that are given could not be omitted for others with benefit or improvement; so that no one can but acknowledge that both rare taste and discrimination have been exercised in the compilation of the material which goes to make up this book. The authors who have been laid under contribution are among the best known and the selections taken from their works are each characterized by a high order of excellence.

Thus, to quote but a few, *The Drama of the Doctor's Window*, by Austin Dobson, is destined to hold its own for many years to come. *The Morning Visit*, by Dr. Oliver Wendell Holmes, is full of the good nature and wit of the Poet of the Breakfast Table. *Doc Sifers*, by James Whitcomb Riley, breathes the

admiration and confidence of the old Hoosier than whom no greater admirer of Doc Sifers can be found. My First Patient, by Dr. William Tod Helmuth, is full of humor and good natured banter such as a physician will indulge in at his own expense. Minerva Medica, by Dr. S. Weir Mitchell, is good. Gunepathy, by John Godfrey Saxe, is full of that well known author's quaintness. We have only picked out a very few at random, and could not give a catalogue of the more than ordinarily good selections or even of the names of the authors quoted without taking up a largenumber of pages. For this reason our best advice to all is to buy the book and have unlimited enjoyment.

Like all the former volumes this one is printed in good, large, legible type upon an extra quality of paper. The binding is like that of the former volumes, gilt top, deckle edge, and gotten up in *edition de luxe* style. In the present volume there are four plates. The Frontispiece is A Cure for the Gout, from the well known original of Dandy Sadler. The next plate is The Anxious Moment, from the painting by B. Vautier. The plate which follows is the well known The Doctor, from the painting by Luke Fildes. The last plate is entitled Post-Mortem. All of these plates are handsomely made and each one tells its own story.

In conclusion we desire to merely reiterate all the good things we have said of this series, and we are sure that any one who obtains the books and reads them will confirm all that we have said about them.

How to Cook for the Sick and Convalescent. Arranged for the Physician, Trained Nurse, and Home Use. By HELENA V. SACHSE. Second Edition, Revised and Enlarged. 12mo. pp. 297. [Philadelphia: J. B. Lippincott Co. 1904.

This is certainly an improvement upon the first edition of this little book. As we stated then, and wish to reiterate now, it should be in the hands of every physician and of every trained nurse. As every one knows, a proper diet is one of the strongest adjuvants to a doctor's medical treatment, and a guide as good as the one before us is invaluable. In this edition there have been seventy recipes added to those in the first division, and in addition there is given a complete classification of the recipes, or food formulas. The preparation of the food is placed on a scientific basis in this book, which is a credit to its author. We shall not be surprised to see a third edition called for in a short time.

Accidents and Emergencies. A Manual of the Treatment of Surgical and Medical Emergencies in the Absence of a Physician. By CHARLES W. DULLES, M.D. Sixth Edition, thoroughly Revised and Enlarged. 12mo. pp. 209. With New Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

Dr. Dulles, manual for the treatment of accidents and emergencies by those who are not physicians has already made for itself such a reputation that it seems superfluous for us to speak further words of commendation for it. It is exactly the book to be adopted for a guide by all, not only those who expect to be called in emergencies but also by those who never expect to have such an appeal made to them. It is such a book as should find a place in every family and be so located as to be readily accessible at any time. The present edition is a great improvement on former ones.

Qualitative Analysis Brief. By ALLARD MEMMINGER, M.D. Second Edition. Revised and enlarged. 12mo. pp. 124. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

The popularity of this small student's manual has been evidenced by the call for the present second edition. As its name indicates, it is brief, but the author has not sacrificed perspicuity to brevity. It is eminently practical and gives ready methods for the qualitative determination of those chemicals which most frequently are met in a physician's practice of whose presence he may have occasion to determine. This booklet has been written for students, but physicians will find it a very useful little book for ready reference. It is printed in such a manner as to have every other page blank to permit of the insertion of notes or additions. The publishers have made a handsome little book of this.

BLAKISTON'S QUIZ COMPENDS?

A Compend of Medical Latin. Designed Expressly for Elementary Training of Medical Students. By W. T. ST. CLAIR, A.M. Second Edition. Revised. 12mo. pp. 131. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

This is an excellent, short, practical little handbook, which is full of instruction and which the author has very well constructed. Attention paid to its instructions will rapidly teach physicians how to dispense with kitchen Latin in writing their prescriptions in their post-graduate days. This book is especially designed for medical students who have neither the time nor the inclination to go through a classic course. We can recommend this as one of the most practical in Blakiston's Quiz Compend Series. Its popularity has been demonstrated by the fact that it is already in its second edition.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

The Surgical Treatment of Bright's Disease. By George M. Edebohls, A.M., M.D., LL.D. 8vo. pp. 337. [New York: Frank F. Lisecki. 1904.

Mechanical Vibration and its Therapeutical Application. By M. L. H. Arnold Snow, M.D. 8vo. pp. 297. [New York: The Scientific Authors' Publishing Co. 1904.

Qualitative Analysis Brief. By Allard Memminger, M.D. Second Edition, Revised and Enlarged. 12mo. pp. 124. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

The Pathology of the Eye. By J. Herbert Parsons, B.S., D.Sc. (Lond.), F.R.C.S. (Eng.) Vol. I. Histology. Part I. 8vo. pp. 388. [New York: G. P. Putnam's Sons. 1904. Price, \$3.50 net.

New Method of Treatment. By Dr. Laumonier. Translated and edited from the Second Revised and Enlarged French Edition by H. W. Syers, M.A., M.D. (Cantab.) 12mo. pp. 321. [Chicago: W. T. Keener & Co. Price, \$2.50 net.

How to Cook for the Sick and Convalescent. Arranged for the Physician, Trained Nurse, and Home Use. By Helena V. Sachse. Second Edition, Revised and Enlarged. 12mo. pp. 297. [Philadelphia: J. B. Lippincott Co. 1904.

Clinical Diagnostic Bacteriology. Including Serum Diagnosis and Cytodiagnosis. By Alfred C. Coles, M.D., D.Sc., F.R.S., (Edin.) 8vo. pp. 237. With Colored Plates. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$2.75 net.

Blood Pressure as Affecting Heart, Brain, Kidneys, and General Circulation. A Practical Consideration of Theory and Treatment. By Louis Faugeres Bishop, A.M., M.D. 12mo. pp. 112. [New York: E. B. Treat & Co. 1904. Price, \$1.00 net.

A Manual of Experimental Physiology. For Students of Medicine. By Winfield S. Hall, Ph.D., M.D. (Leipsic). 8vo. pp. 245. With 89 Illustrations and a Colored Plate. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, \$2.75 net.

The Surgery of the Abdomen. Part I. Appendicitis and other Diseases about the Appendix. By Bayard Holmes, M.D. 8vo. pp. 350. With 39 Illustrations and 7 Plates, two of which are in Color. [New York and Chicago: D. Appleton & Co. 1904. Price, \$2.00 net. Sold only by subscription.

THE MEDICAL EPITOME SERIES.

Toxicology. A Manual for Students and Practitioners. By Edwin Welles Dwight, M.D. 12mo. pp. 298. Series edited by Victor Cox Pedersen, A.M., M.D. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, \$1.00 net.

BLAKISTON'S QUIZ COMPENDS?

A Compend of Medical Latin. Designed Expressly for Elementary Training of Medical Students. By W. T. St. Clair, A.M. Second Edition. Revised. 12mo. pp. 131. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

The Art of Compounding. A Text Book for Students and a Reference Book for Pharmacists at the Prescription Counter. By Wilbur L. Scoville, Ph.G. Third Edition, Revised and Enlarged. 8vo. pp. 337. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$2.50 net.

Accidents and Emergencies. A Manual of the Treatment of Surgical and Medical Emergencies in the Absence of a Physician. By Charles W. Dulles, M.D. Sixth Edition, thoroughly Revised and Enlarged. With New Illustrations. 12mo. pp. 209. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

A Treatise on Bright's Disease and Diabetes. With Especial Reference to Pathology and Therapeutics. By James Tyson, M.D. Second Edition, Illustrated. Including a Section on the Ocular Changes in Bright's Disease and in Diabetes. By George E. de Schweinitz, M.D. 8vo. pp. 381. With 7 Colored Plates and 43 Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$4.00 net.

The Doctor's Recreation Secies. The Doctor's Window. Poems by the Doctor, for the Doctor, and about the Doctor. Edited by Ina Russelle Warren. With an Introduction by William Pepper, M.D., LL.D. 8vo. pp. 288. Illustrated. [Akron, Ohio: The Saalfeld Publishing Co. 1904. Price, silk cloth, \$2.50; half-morocco, \$4.00. Sold by Subscription Only.

Kirke's Hand-Book of Physiology. Nineteenth London Edition, Revised and Enlarged. By W. D. Halliburton, M.D., F.R.S. Thoroughly Revised and in many Parts Rewritten. Small 8vo. pp. 902. With nearly Seven Hundred Illustrations,

including some Colored Plates. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, cloth, \$3.00 net; sheep, 3.75 net.

Text Book of Human Physiology. Including Histology and Microscopical Anatomy, with especial Reference to the Practice of Medicine. By Dr. Landois. Tenth Revised and Enlarged Edition, edited by Albert P. Brubaker, M.D., translated by August A. Eshner, M.D. 8vo. pp. 1027. With 304 Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, cloth, \$7.00 net; sheep, \$8.00 net.

A Text-Book of Practical Therapeutics. With Especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M.D., B.Sc. Tenth Edition. Enlarged. Thoroughly Revised and largely Rewritten. 8vo. pp. 908. Illustrated with 113 Engravings and 4 Colored Plates. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, cloth, \$4.00 net; leather, \$5.00 net; half morocco, \$5.50 net.

International Clinics. A Quarterly of Illustrated Clinical Lectures and especially prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otolaryngology, Rhinology, Laryngology, Hygiene, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the world. Edited by A. O. J. Kelley, A.M., M.D.; Wm. Osler, M.D.; John H. Musser, M.D.; John Stewart, M.D.; John B. Murphy, M.D.; A. McPhedran, M.D.; Thomas M. Rotch, M.D.; John G. Clark, M.D.; James J. Walsh, M.D.; J. W. Ballantyne, M.D.; John Harold, M.D.; Edmund Landolt, M.D.; and Richard Kretz, M.D. With Regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Vol. III., Fourteenth Series. 1904. 8vo. pp. 302. [Philadelphia: J. B. Lippincott Co. 1904. Price per volume, cloth, \$2.00; half-leather, \$2.50. Each series consists of four volumes.

The American Medical Journalist has been resuscitated and is better than ever. It is a publication interesting and useful alike to advertisers and publishers. It is published monthly by the American Medical Journalist Co., 220 Broadway, New York.

The Perpetual Visiting and Pocket Reference Book has been issued by the Dios Chemical Co. of St. Louis. It is a very useful little book, which will be furnished free to all physicians making a request therefor accompanied by ten cents. It includes information on clinical emergencies, a posological table, etc. It is quite neatly gotten up.

The Sympathetic Nerve is a life-size chart from original dissections by Byron Robinson, of Chicago. It is a chart which is certainly deserving of a place in every dissecting and operating room. It is drawn in a clear, practical manner and not complicated nor difficult to follow. This is published by E. H. Colgrove, 65 Randolph St., Chicago, Ill. The price of this valuable chart is 50 cents.

The Physician's Pocket Account Book, by Dr. J. J. Taylor, is a neat, compact, easily kept and strictly legal book, carried in the pocket, always with you, showing each person's account at a glance. All entries are made but once, on the day when the services are rendered, in plain legal language, and require no posting or further attention. Published by the Author, 4105 Walnut Street, Philadelphia.

A General Catalogue of Medical Books is a neatly printed little leather-covered book of 109 pages, interleaved throughout and issued by P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia. The book gives an index by authors' names and prices are attached. In the second portion is a catalogue of books by subjects. The publishers are ready to furnish any book in this catalogue at the marked price. This little book is very useful, and is furnished by the publishers at 25 cents.

Lindsay and Blakiston's Visiting List for 1905 has been received, and it still presents the same neat and inviting appearance which it always did. This is the 56th year of its publication, and not only continues a favorite with its former patrons, but it seems to have gained many new friends of late years. We are pleased to see this as it is certainly deserving. It is published by Messrs. P. Blakiston's Son & Co., of Philadelphia, whose advertisement appears on another page. The price of the weekly call-list arranged as formerly is \$1.00 net.

The Mesogastrium is a 35 page brochure by Byron Robinson, B.S., M.D. It is based upon 600 personal autopsic abdominal inspections and is well written as well as thorough, like all the articles written by this author are. It is illustrated with forty interesting wood-engravings and contains much that is new anatomically and which cannot fail to interest both anatomists and surgeons. The author is an indefatigable anatomical investigator and what he writes is always well worthy of preservation. This brochure, reprinted from the *American Medical Compend*, is published by E. H. Colgrove, 65 Randolph St., Chicago, Ill. The price is 25 cents.

"Sapphire Waltz."—We have just received a copy of the most popular piece of music ever published in this country, called "Sapphire Waltz," composed by Charlie Baker. It is written in an easy style and can be played on either piano or organ.

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The Medical News Visiting List for 1905 has been received. It is issued in four styles: weekly, dated, for 30 patients; monthly, undated, for 120 patients monthly; perpetual, undated, for 30 patients weekly per year; and undated, for 60 patients weekly per year. The weekly, monthly and 30-patient perpetual contain 32 pages of data and 160 pages of classified blanks. The 60-patient perpetual consists of 256 pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil and rubber, and calendar for two years, \$1.25. Thumb-letter index, 25 cents extra. By mail, postpaid, to any address. It is published by Lea Brothers & Co., Philadelphia, Pa.

The Christmas Delineator.—The Christmas *Delineator* will be welcomed in every home. The fashion pages are unusually attractive. A selection of love songs from the Wagner Operas, rendered into English by Richard de Gallienne and beautifully illustrated in colors by J. C. Leyendecker, occupies a prominent place, and a chapter in the Composers' Series, Relating the Romance of Wagner and Cosima, is an interesting supplement to the lyrics. A very clever paper, entitled "The Court Circles of the Republic," describes some unique phases of Washington social life, is from an unnamed contributor, who is said to write from the inner circles of society. There are short stories from the pens of F. Hopkinson Smith, Robert Grant, Alice Brown, Mary Stewart Cutting and Elmore Elliott Peake, and such interesting writers as Julia Magruder, L. Frank Baum, and Grace MacGowan Cooke hold the attention of the children.

MISCELLANEOUS NOTES.

The psychological depressions and neuralgias so common in the period following a debauch, are lessened or disappear altogether by the use of Celerina.

Elongation of the Uvula.—As a gargle in sore throat of elongation of the uvula, Kennedy's Dark Pinus Canadensis has very general endorsement, the usual proportion being teaspoonful to glass of water.

There is no Substitute for Sanmetto in Acute or Chronic Prostatitis, Cystitis and Nephritis.—I have prescribed Sanmetto quite extensively in the last ten or twelve years, and I must say I like the remedy very much in all forms of genito-urinary troubles. I can find no substitute for Sanmetto in either acute or chronic prostatitis, cystitis and nephritis. I am not in the habit of giving testimony to proprietary remedies, but I must confess my faith in Sanmetto and shall continue to prescribe it as long as it gives results. J. C. Dreher, M.D., Plainwell, Mich.

Nervous and Mental Diseases.—In the various forms of nerve diseases, as trifacial neuralgia, cerebro spinal meningitis, hysteria and arthritis deformans, atrophy of the muscles, contractures and abnormal tension become apparent. The nerve irritation so affects the vasomotor system that it causes anemia, depraved nutrition and consequent starvation of the special centers in the spinal cord.

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Every Physician Knows.—In the *North American Practitioner*, under the head of "Intestinal Antisepsis," reported by Dr. Pettingill of New York City, we find some excellent experiences and from which the following is selected :

"Every physician knows full well the advantages to be derived from the use of antikamnia in very many diseases, but a number of them are still lacking a knowledge of the fact that antikamnia in combination with various remedies, has a peculiarly happy effect ; particularly is this the case when combined with salol. Salol is a most valuable remedy in many affections ; and its usefulness seems to be enhanced by combining it with antikamnia. The rheumatoid conditions so often seen in various manifestations are wonderfully relieved by the use of this combination. After fevers, inflammations, etc., there frequently remain various painful and annoying conditions which may continue, namely : the severe headaches which occur after meningitis, a 'stitch in the side' following pleurisy, the precordial pain of the pericarditis, and the painful stiffness of the joints which remain after a rheumatic attack—all these conditions are relieved by this combination called 'Antikamnia & Salol Tablets,' containing $2\frac{1}{2}$ grains each of

antikamnia and of salol and the dose of which is one or two every two or three hours. They are also recommended highly in the treatment of cases of both acute and chronic cystitis. The pain and burning is relieved to a marked degree. Salol makes the uric acid and clears it up. This remedy is a reliable one in the treatment of diarrhea, enterocolitis, dysentery, etc. In dysentery, where there are bloody, slimy discharges, with tormina and tenesmus, a good dose of sulphate of magnesia, followed by two antikamnia and salol tablets every three hours, will give results that are gratifying."

Dermapurine and Dermapurine Soap.—I have used Dermapurine with great satisfaction and think it a very valuable preparation.—Dr. I. L. Moore, Griffin, Ga.

I am much pleased with Dermapurine Soap.—J. Ed. Ray, M.D., Sugar City, Colo.

Dermapurine is a splendid preparation.—John H. Decherd, M.D., Thackerville, Ind. Ter.

I used samples of Dermapurine with the most satisfactory results.—M. P. Putnam, M.D., Boston, Mass.

I am much pleased with Liquid Dermapurine.—C. E. Nusbaum, M.D., Bremen, Ind.

West Jefferson, Ohio, Feb. 18, 1901. Derma Remedy Co., St. Louis, Mo. Gentlemen:—I received samples of Dermapurine and Soap, and am well pleased. Dermapurine is a beautiful preparation. I am, most respectfully yours, L. F. Scofield, M.D.

Your samples received some time ago. I used them in a case of Impetigo, and of Herpes, and one of Acne. They all commenced immediately to improve and in a few days were well. Dermapurine deserves the highest praise that can be bestowed. Dr. H. T. Wharff, Edwardsville, Ill.

A Perfect Food.—In treating anemia is it not true that our first thought, and that to which our instinct should naturally lead us, is a normal blood standard? That there is a deficiency of iron in the blood in most forms of anemia, is, of course, indisputable; and to endeavor to supply this lack by the administration of iron seems but a common-sense procedure. This practice would be sufficient if anemia were in reality nothing more than a condition of iron deficiency; but the profession realizes now that the underlying costive factor is a disturbance of the process of nutrition and cell proliferation, and that iron poverty is but one manifestation of this disorder. Ample proof of this fact has been presented to every doctor when he has observed how anemic conditions persist in spite of the long continued administration of the various preparations of iron. Here, then, iron preparations must be supplemented by such remedies or by such a remedy as has the ability to awaken the depressed nutritive and cell proliferating process. To stimulate, tone up and supply perfect nutrition in all anemic conditions, I have found Bovinine to meet every indication par excellence.—John Griggs, M.D.

Contents on Colored Page IX.

Vol. LXXXVII. No. 6.

Whole No. 768.

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DECEMBER, 1904.

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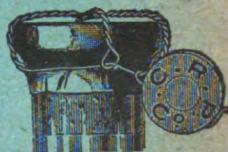
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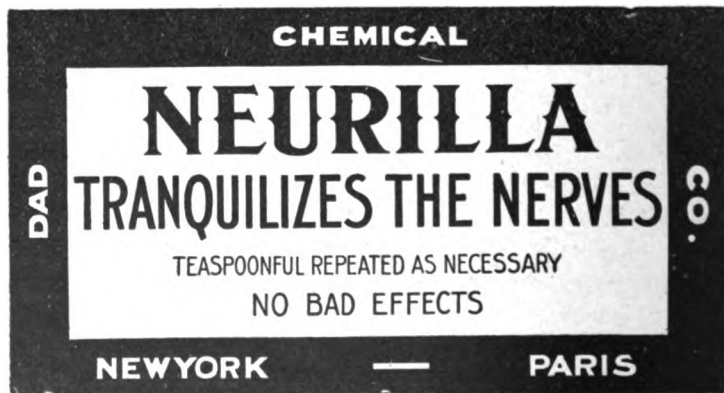
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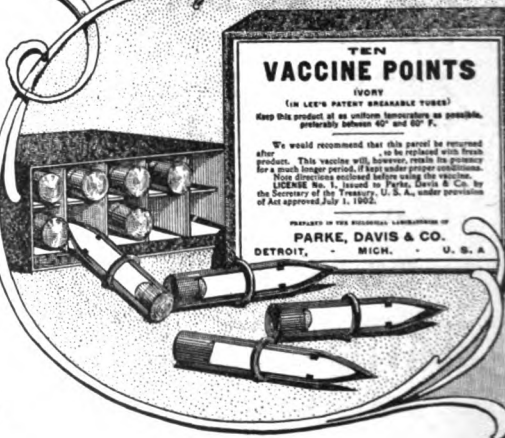
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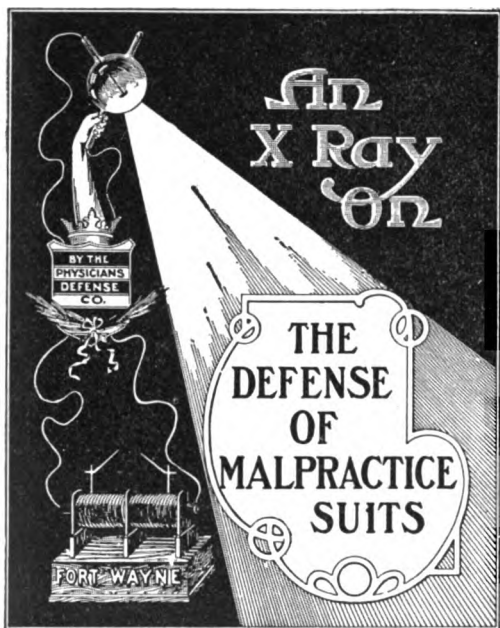
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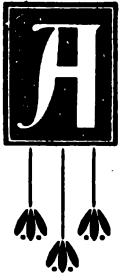
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SPECIAL NOTE.—Fellows' Syrup is never sold in bulk, but is dispensed in bottles containing 15 oz.

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